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ABSTRACT

THIS FINAL REPORT OF A CONFERENCE ON CURRICULUM DEVELOPMENT WITHIN THE ES '70 PROGRAM IS DIVIDED INTO THREE PARTS. THE FIRST PART CONTAINS ADDRESSES CONCERNING THE COMPREHENSIVE HIGH SCHOOL AND THE ES '70 PROGRAM AS A CURRICULUM INNOVATION. THREE CURRENT TRENDS--INDIVIDUALIZED INSTRUCTION, CHANGES IN INSTRUCTIONAL THEORY, AND CHANGES IN INSTRUCTIONAL TECHNOLOGY--ARE RELATED TO THE ES '70 PROGRAM. PART TWO STRESSES THE NEED TO FORMULATE AN INTERLOCKING SYSTEM, FROM THE FEDERAL LEVEL TO THE LOCAL CLASSROOM, IN THE AREA OF PLANNED CHANGE. THROUGH A SYSTEMS APPROACH, A CAPACITY TO APPLY ALL RELEVANT KNOWLEDGE AND THE USE OF INSIDE AND OUTSIDE RESOURCES, THE PROGRAM FOR PLANNED CHANGE WOULD BE ENHANCED. PART THREE EXTRACTS THE IMPLICATIONS OF A SMALLER ES '70 CONFERENCE GROUP IN NEW ORLEANS. THE IMPORTANCE OF THE STUDENT AND HIS EDUCATIONAL NEEDS ARE EMPHASIZED. A CASE STUDY IN EDUCATIONAL IMPROVEMENT THROUGH PLANNED CHANGE CONCLUDES THE REPORT. (LN)

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EDUCATION CONFERENCE TO CONSIDER SUITABLE GOALS OF A CURRICULUM DEVELOPMENT EFFORT

(Chapter V of ES '70 In Theory and Practice)

June 1969

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

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EDUCATION CONFERENCE TO CONSIDER SUITABLE GOALS OF A CURRICULUM DEVELOPMENT EFFORT

The Conference Report Itself is Presented Here as
Chapter V
ES '70 IN THEORY AND PRACTICE

Submitted by Dorothy Mial
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June 24, 1969

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HEALTH, EDUCATION, AND WELFARE

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ERIC REPORT RESUME

SUMMARY

This report places ES '70 in historic perspective, looks at the theory and strategy of planned change; presents recommendations and derives action implications from a national conference of curriculum experts, educators, and students; and presents the case study of one ES '70 system, Quincy, Massachusetts. The report falls into three major parts.

PART ONE - In Perspective

David S. Bushnell reviews the concept first advanced some 50 years ago for a comprehensive high school and describes ES '70 as an effort to implement plans widely accepted but never carried out. Bushnell relates ES '70 to three major current trends: the upsurge of interest in individualized instruction adapted to ability levels and learning styles, significant advances in instructional theory, and emerging instructional technology. In a second chapter Arthur W. Foshay goes further in looking at ES '70 as a large scale effort to alter the secondary curriculum. Foshay looks at history for help in understanding this current effort and in clarifying the critical issues that ES '70 faces as a large scale reform effort.

PART TWO - Theory and Practice of Planned Change in Education

Ronald Lippitt builds on Bushnell and Foshay and outlines guidelines and pitfalls of planned change. He stresses the need in a national effort to formulate an approach with both vertical and horizontal dimensions, conceptualizing an interlocking system from federal level to the local classroom. He sees as a key need more adequate utilization of relevant knowledge and presents a model or flow chart for such utilization. Lippitt calls for a strategy for change that would include use of inside-outside resources, simultaneous concern for task and process with "process inquiry periods" built in as needed to avoid costly miscommunications, and for continuous data collection and feedback (and feedback on feedback) to guide change. Lippitt appends a summary report on a knowledge utilization conference model which may prove useful to ES '70 and other systems as a format for deriving action implications from research.

Lewis Rhodes looks at ES '70 as a large scale effort to deal systematically with a complex social problem. He sees systems approach as now having the capacity to apply technological knowledge and sophistication to the development of humane organizations. He sees ES '70 in an early stage of development but one in which the member school systems are moving toward improvement. He identifies factors that he sees as contributing to this movement. Like Lippitt he sees need for adequate linkage, for mechanisms to facilitate analysis and planning, and for concern for human factors that may help or hinder planned improvement. He defines the type of outside management assistance that is needed as "a blend of multi-disciplinary expertise and humanistic concern."

PART III - In Action

The ES '70 New Orleans Conference is described both in terms of substantive deliberations and recommendations and in terms of the dynamics of a diverse group of creative, individualistic, committed people as they attempt to communicate. The conference report reflects movement from initial anxiety, some conflict, and some fear (e.g. the federal "takeover") to the promising start of a constructive dialogue. In a section on Implications, Lucille Schaible derives implications related to the following issues:

1. Behavioral Objectives - e.g. the need to involve the learner in setting his own objectives; the need for an experiential attitude toward curriculum improvement, the need for such intervening variables in the learning process as satisfaction with school, the need for considering objectives related to work as well as to academic experience.
2. Relevance - e.g. the need to be in contact and communication with student needs; the need to develop guidelines for including learning experiences that may not be immediately relevant.
3. Individualization - e.g. the need to develop the individual's unique potential, the need to rethink educational values, the need to take into account differences in values related to ethnic or socio-economic differences, the need to experiment in various ways to relate use of the machine with use of sensitive teachers.
4. Integrated programs - with considerable concern expressed over the danger of losing basic skills of a discipline but with agreement that some integration is needed; agreement as to the need for new cross-disciplinary work in teacher training.
5. Redefining what it means to be educated - with stress on need to deal with the question of what to do with boys and girls after they leave high school; with interest in work-study programs; with interest in seeing student unrest and protest as potential sources of energy and help in community affairs.
6. In-service teacher education - with stress on need for continuing professional development to help teachers keep up with new knowledge and new methodologies; also need to link teachers up with curriculum experts.

7. Structural change in programs, scheduling, and course requirements - with stress on need to rethink values and what these mean for structure, etc.; also need to reorganize resources in schools and in communities

There was considerable agreement as to the need for continuing the kind of dialogue initiated at New Orleans (with students continuing to be involved).

In the concluding chapter, Superintendent of Schools Lawrence P. Creedon and Educational Consultant Miriam Ritvo look at the Quincy experience, a case study in educational improvement. The Quincy study describes an evolving organizational development program in a human system which has been moving from a centralized traditional hierarchy to a more dynamic, self renewing decentralized structure over the past six years. The change process is traced by looking at major program events in terms of how decisions were made. Newly emergent values cut across organizational structure, policies, work methods. A major objective is to develop trust, openness, and joint decision making. The Quincy story represents attempts to apply insights presented both in the Lippitt and the Rhodes papers. The basic commitment is to the fact that change in curriculum or in any other major aspect of the system will require diagnostic, organizational, and planning for and with the system as a whole. A guiding principle is that achievement requires commitment and that commitment comes through involvement and shared influence.

PART ONE - IN PERSPECTIVE

Chapter I - The Comprehensive High School
by David S. Bushnell

Chapter II - ES '70 As A Curriculum Innovation
by Arthur W. Foshay

Chapter I

THE COMPREHENSIVE HIGH SCHOOL

David S. Bushnell
Director, Division of Comprehensive and
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School administrators and teachers are under tremendous pressure from dozens of scholarly, and some not-so-scholarly, groups to bring about a radical change in that once Dewey-eyed, now rigidified, institution called the comprehensive high school. Let us look at what is right, and what is wrong, with this venerable institution.

The current program of the comprehensive high school dates back almost 50 years. It remains essentially untouched since the recommendations in 1918 of the Commission on Reorganization of Secondary Education. This is a remarkable fact when one examines the multitude of forces conspiring to bring about radical changes. Important advances in the concept of inquiry, in self-direction, and in achievement motivation, are just beginning to trickle down to the more than 20,000 secondary school systems in this country. Dramatic applications are being tested in the more innovative schools. Unfortunately, few, if any, of these efforts are being replicated on a wide scale. Nor is there much hope that such changes will occur in more than a few additional districts. Our educational system today is the pawn of opposing but equally powerful forces, the forces for and the forces against change. Thus, like a metal sphere suspended between magnetic poles, our high schools are pushed in both directions at once. Result: Inertia.

We need only to compare our system of education in this nation with those of most other countries to highlight both our strengths and weaknesses. In terms of equality of access to education and in terms of social and economic mobility, our schools offer an important and meaningful experience for those who have learned to adapt to their requirements. We enjoy in this country a uniquely high level of public school enrollment through the 12th grade. Only Japan and England come close to graduating the number of students that we do. Nevertheless, it would be misleading not to observe that 30 percent of the students enrolled in our high schools drop out before graduation. And, for many of those who do manage to hang on through the 12th grade, it has been, at best, a passively-tolerated experience. What our schools actually offer is an education oriented to those who are capable of conforming to the demands of the dominant white middle-class culture.

A second characteristic of our high schools as compared with schools of other nations is our emphasis on rewarding students for achievement as against punishing them for failure. No country openly advocates a policy of failure, though actual practice frequently adds up to the same thing. Most nations, for lack of economic resources, impose on their educational systems a sharply narrowing pyramid of enrollment as students move upward through the grades. There is almost exclusive emphasis upon preparation for higher academic attainment. We, on the other hand, have moved much closer to achieving universal education for all students, through the 12th grade. Our policies provide education offerings such that the high school graduate may go on to college or into a job. What we profess in our Cardinal Principles of Secondary Education is a commitment both to the college-bound and to the non-college-bound student alike. Even James Conant endorsed this position by observing in his latest book, The Comprehensive High School, that vocational education should be included in the curricula of the comprehensive high school, not only because of its value to the individual but, more importantly, because of its value to the ideals of American democracy. In his earlier book, The American High School today, Conant points out,

> "Vocational education is not offered in lieu of general academic education, but grows out of it, supplementing and enhancing it. Vocational education is an integral part of the total education program."

Unfortunately, today's high school programs fall considerably short of this goal. Primary attention has been lavished on the college-bound student. Vocational education, for a host of reasons--its costs, the attitude of most college trained teachers, and its often times narrow and specialized focus--has not fulfilled its promise at the high school level. Some form of occupational education in high school offers one of the best ways of making education relevant to a whole host of students. We profess to a dual system of education with bridges between, but in reality there are no bridges. And both groups suffer as a result.

A third aspect of our public education system is the growing recognition of the need for experimentation and research. This aspect of education, however, cannot be discussed as we have discussed the previous two. No longer can we consider education in terms of untested concepts that promise improvement in education. The future of education, I believe, must be discussed in terms of a process of change as well as what specific changes should be considered. Please note the subtle shift from talking about the past to talking about the present and future. Most commentary about the educational scene is derived from educational speculation and not from empirically derived recommendations. Dewey, Whitehead, Conant, and a host of others have failed to achieve their eloquently stated objectives because they have not coped with the complexity of the change process. If we too are not to fail, we must concentrate not solely upon what education should be but also upon how we get to where education should be.

To illustrate the point, let me describe some of the advances which have been brought about through investments in research and development.

Throughout the last decade, federal support for research through the National Defense Education Act and Cooperative Research Program have helped to stimulate widespread interest in tested alternatives to the problems confronting education. We have witnessed actual demonstrations of the applications of some of the newer concepts and alternatives to more traditional programs. Let me prophesy that these are only a forerunner of new educational strategies for the future.

I would like to summarize three major "happenings" which give promise of improving the quality of education available to our offspring. These three range from new curriculum efforts to changes in school organization and administration, excluding improvements in school design and facilities.

The first happening is the upsurge of interest in individualized instruction adapted to the ability levels and learning styles of students of varying backgrounds and aspirations. The basic empirically validated premise supporting the IPI concept is the observation that man is not genetically limited in his capacity to learn. Achievement of the goal of optimal learning for each individual will require a raft of empirically validated new teaching materials and methods and school organizational patterns, as well as profound attitudinal changes on the part of teachers and administrators.

A number of curriculum researchers, such as John Goodlad, see today's stress upon IPI as progress beyond the discipline centered reform movement started back in the early '50's. They are concerned with the total curriculum. Subject-by-subject curriculum reform must continue as an important enterprise, but there is growing recognition that discreet and separate courses will not necessarily insure a balanced education, or, for that matter, a minimally adequate education. Horizontal as well as vertical integration of subject areas is needed.

In Goodlad's words, "Curriculum planners need (a) more precise objectives, (b) criteria for all kinds of choices and decisions, and (c) operational models of what happens when differing data and differing sets of values are used in making these decisions." By linking the knowledge to be learned with the information processing habits of students (cognitive style), we can begin to offer alternative pathways for more students, not just the verbally gifted, to achieve at least the minimal level of performance required to function as an adult.

A second happening grows out of advances in instructional theory. It is almost commonplace today to observe that learning readiness and academic achievement appear to be as much a function of teaching method as of subject matter--even two and three year olds are being taught to read. Schools are beginning to respond to these advances in instructional theory by organizing non-graded and multi-graded classes, by grouping students according to interests and abilities and learning styles, by experimenting with team teaching and other ways of differentiating teacher roles which permit flexibility of class size and better matching of teaching abilities with the instructional chores. In other words, there is a strong trend towards learner-centered as against teacher-centered teaching. Contract systems as illustrated by the Duluth demonstration and NYIT's illustration of the computer managed instructional system are now making it possible to schedule each student on a one- to two-week modular basis, permitting schedules to be adapted to individual student requirements. Successful learning experiences, be they group or individual study, are helping to reinforce the desire to continue one's learning beyond the formal years. Success also helps to reinforce the sense of competence and control over one's own destiny which we know to be an essential ingredient in the adult personality.

A third trend is toward utilization of new technology. This has been given great publicity but, in my opinion, is not quite off the launching pad. Tom James, Dean of the School of Education at Stanford, has expressed the problem this way:

> "Present applications of the new technology put the cart before the horse. Instead of the new education-industrial complex dumping $50 billion worth of junk on the educational market, instead of money for machines, the complex needs

> to first spend a lot more time and money on the nature of the learning process."

Nevertheless, leading educators and businessmen are counting heavily on the new instructional technology to produce major improvements in the effectiveness of the learning process, while at the same time helping to stretch the education dollar.

These are today's trends, ranging from radical changes in instructional methods and content to new instructional equipment.

Each has implications for the comprehensive high school. Before relating these to Education Systems for the Seventies (ES '70), let us look at the unique elements of the secondary school which serve to differentiate it from elementary and post-secondary education. These are not the characteristics which emerge from the nature of the school or of the educational process itself. They are the characteristics which emerge from the personality of the adolescent who hopes to make a successful adjustment during that eventful period between childhood and adulthood. Each student comes to the secondary school with his own unique history of learning successes and failures. His attitudes and orientation to learning have been shaped by several past years of education with variable effects. His reading, listening, and communication skills are well ingrained. He is beginning to be aware of the pressures to qualify for college entrance or for work. In a real way, he is beginning to sense the joy associated with independence and individual identity. Yet, he is also concerned with membership in a peer group, often he aches for acceptance and is fearful of being seen as different. It is just this seeking out of social acceptance and understanding of interpersonal relations that makes him the unique personality that he is during these transitional years. He is not yet an adult but covets and strives for acceptance in the adult world. This is the raw material with which the secondary school must work. These are the concerns that led to the launching of a new effort to improve education. The goal has been nothing less than to revolutionize the secondary schools throughout this country.

ES '70

In the spring of 1967 a network of 17 school districts was formed to devise and execute a program for the development of a new comprehensive high school program which would, at one and the same time, provide an individualized education for each student, utilize appropriate educationally oriented technology, employ suitable systems of school organization, be economically practical within available public resources, and yet be highly relevant to the adult roles of the student. This effort we labeled ES '70 or an Education System for the Seventies. Two types of investments on the part of the Office of Education have been incurred since then. The first consisted of a small direct expenditure in each school district for the purpose of establishing a climate and an understanding of the objectives of the program. The second consists of a whole series of coordinated research and development efforts that aim at producing a rich array of tested alternatives to existing practices which will ultimately be made available to all local school districts in the United States. Each research project has been linked into a systematic plan for development and implementation to insure that each component part can be so organized that the ES '70 network schools can assemble the components into a comprehensive system adapted to their unique requirements.

What is the end product or expected output of these labors? This is, at best, a hazardous question. Even the participating school superintendents, their boards of education, and the ES '70 coordinators upon whose shoulders fall the major burdens of this cooperative effort are not absolutely sure what the end product will be. They are embarked on an exciting venture. Here, however, is one man's view of the first prototype ES '70 school.

The ES '70 school will be a learning center, flexible in construction, in curriculum, and in schedule. School hours will no longer run from 9:00 a.m. to 3:00 p.m.; schools will be open from early in the morning--perhaps 7:00 a.m.--until 10:00 or 11:00 at night 12 months a year. The programs of individual students, and their learning schedules, will be suited to their needs. Thus a student may be working part-time but will have his education--his classes, lectures and self-study commitments--organized in such a way that it will not conflict with his job.

Further still, a student's job and his classes will be coordinated. His formal education will carry him outside the school building part of the time so that "real-life" experiences can sharpen his sense of the relationship between himself and his community. Learning in the '70's will no longer be considered exclusively academic; all work performed by the student which helps him master new skills and develop his potentialities, as well as all work which at the same time prepares him to assume an adult role in his community, will be considered part of his education. In the school building itself, therefore, space will be allocated to various trades and industries, and instruction will be given by men and women who are technical experts in their field, but who in addition have been certified as special teacher-aides. In some communities, such classes may actually be held at the industrial plant itself.

In weaving together academic and vocational education, the ES '70 school uses practical matters as a way of providing insight into material that a substantial number of high school students would otherwise consider irrelevant. The occupational goals of young people, their desire for economic self-sufficiency, and their involvement with particular vocational activities, can provide the motivation for achievement in related subjects such as science and mathematics.

ES '70 is fully aware of the fact that an educational system must contribute to the nation's well-being on three levels; economic, political, and social. Without an informed public, it is difficult to see how complex political issues can be presented to the voters with any hope of obtaining an intelligent consensus. On the social level, it is almost certain that the only approach to a well-ordered democratic society lies in the ability of people to get along with each other, fully respecting each other's uniqueness. But these issues cannot be taught in the abstract to students whose primary concern is getting a job when they graduate. It must work the other way around; by beginning with the student's own concern--a job--an educational system can be developed which will also teach him the things he must know (reading, for example, or the social science insights) in order to be a useful member of his community, in regard to both political and social matters.

Each student will pursue his studies at his own pace or in groups by making use of a wide range of new instructional techniques: audiovisual aids, self-study systems, programmed instruction and other self-pacing devices, educational television (closed circuit and public broadcast), computer-managed instruction, single concept films, communication-linked study centers, testing machines, and many other instruments. While students may often be studying alone, there will be specific periods set aside for them to meet as a group with teams of teachers who will help with tasks that have posed troublesome problems. At the same time older students from more advanced classes will be encouraged to join these groups as tutors so that they can pass along what they have already learned. This last serves a double purpose: younger students gain by being taught and older ones gain--even more, by teaching. Credit for social service will be earned by the tutors, thus reinforcing the ES '70 emphasis on the human dimension in education.

A student's standing at any given moment will simply reflect a realistic evaluation of the quality of work he has done up to that point: the level of skill that he has shown and the body of knowledge that he has absorbed. The competitive spirit will endure, it will express the student's search for ways in which he is superior, but success will not be measured by how his performance compares with that of other students. Teachers in the '70's will help the student evaluate his performance in relation to himself as he strives to achieve goals that he has selected with the help of the school staff. Periodic checks of present accomplishments against those of the past, will yield a progress index which becomes the basis for defining the next quota of work and, perhaps, an upgrading of future aspirations.

To increase the individualized nature of any particular course of study, examinations will be available upon request at any time. If a student has finished a series of assigned work problems and believes that he has mastered the necessary skills, he can go to the achievement center where he can ask for an evaluation of his progress. On the basis of that evaluation, he may proceed to the next stage of study. The examination will take place in a special school unit and will utilize electronic scoring devices, leaving those sections that cannot be scanned by machines to be examined and rated by special examiners. One advantage of this method is that these examiners will be able to establish and maintain essentially objective and consistent standards of judgment.

Since students in this new type of learning center will not be given passing or failing grades at the end of the year, there will be periodic evaluations of the individual's rate of progress. He will confer with counselor-teachers who are prepared with a complete and up-to-date record of his accomplishments made available through computers. At intervals throughout the year, each of the student's teachers will record on tape his subjective impression of the student's abilities and attitudes. These will be filed as part of his master-profile. On the same tape will appear evaluations of his learning progress. These observations will be available to parents, who in addition will receive periodic printed reports.

As part of the new approach to education in the '70's, the school will develop a greater emphasis on improving interpersonal relationship skills. As our population, like that of the rest of the world, expands astronomically, the individual increasingly feels lost in the crowd. Secondary schools in the '70's will have to take steps to reaffirm and give substance to the American belief that the individual counts, that his progress is noted, and that others care about what happens to his life. This can hardly be communicated more effectively than in a close working relationship between students and teachers.

In closing, I would like to quote from George Leonard's Education and Ecstasy. Mr. Leonard, a senior editor for Look Magazine, has written, in my view, a first rate statement on what is wrong with education and where it might go if given the opportunity. His imaginary treatment of the classroom in the future sets a new target for those of us who are concerned with innovation. He says:

> "All that goes in most schools and colleges today is only a thin slice . . . of what education can become . . . . Already, the seeds of a real change are germinating--on college campuses, in teachers' associations, in laboratories of science, in out-of-the-way places . . . . This reform would bypass entirely the patchwork remedial measures . . . that presently pass for reform. It cuts straight to the heart of the educational enterprise, in and out of school, seeking new method, content, idiom, domain, purpose and, indeed, a new definition of education. Far from decrying and opposing an onrushing technology, it sees technology as an ally, a force that can as easily enhance as diminish the human spirit. Avoiding hard-and-fast assumptions of its own, it is rigorous in questioning some of the automatic assumptions of the past. It is (indeed) a new journey."

In the chapters which follow we look more closely at forces that may help or hinder the realization of the ES '70 vision. Arthur W. Foshay places this development in the historic perspective of other attempts at curriculum reform, and further defines ES '70 -- as a network, as a strategy for integration, as a hierarchical structure, as "moral imperative," as applied research, as an expression of professional and public consensus, as "the most broadly and comprehensively conceived attack on the problems of secondary education since the thirties and perhaps since the Nineteenth Century." In Part II, the Theory and Practice of Educational Change, Ronald Lippitt analyzes the change process as viewed by a behavioral scientist and student of the dynamics of planned change. Louis Rhodes approaches this complex of forces and counterforces from the viewpoint of the systems analyst. In Part III, this review of ES '70 presents two realities: first, the effort on the part of some one hundred individualistic, creative, committed persons to arrive at some consensus (or clarification of differences) in the course of a two and a half day work conference on ES '70, and second, an examination or case study of progress in one ES '70 school system attempting to employ a rational, participative decision making approach to educational improvement. Lawrence Creedon, Superintendent of Schools in Quincy, and Miriam Ritvo, educational consultant, developed this study telling one system's approach to the arduous but impelling task of building a better educational system. The Quincy story illustrates the promising potential of merging a systems approach as described by Rhodes with the kinds of training for interpersonal competence referred to by Lippitt.

In the chapter on the ES '70 New Orleans conference on curriculum reform, Lucille Schaible, conference report editor, adds a section in which she derives implications from the reports of the general sessions and subgroup meetings. The implications have added meaning by virtue of the fact fact that discussants included not only the curriculum expert, the subject matter specialist, the association leader, the educational consultant, the change specialist but also the "forgotten consumer" - the student - and the too often forgotten classroom teacher.

This document, then, is an effort to do these things: to pose a challenge, to define a new thrust, to set this in historic perspective, to suggest guidelines for achieving improvement goals, and to assess where ES '70 is in the light of actual experience.

Chapter II

ES '70 AS A CURRICULUM INNOVATION

Arthur W. Foshay
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ES '70 is best considered as a large scale attempt to alter the secondary school curriculum, root and branch. So viewed, whatever has been learned about curriculum innovation, or curriculum development, becomes relevant. In this memorandum, I shall discuss two aspects of this knowledge: the kinds of large scale reforms that have been attempted, with some speculations concerning why they succeeded or failed, and the question of strategies for innovation.

Attempts at large-scale curriculum reform.

The most interesting attempts at large-scale curriculum reform have taken place since the appearance of the universal tax-supported school, which took place in most Western countries (including the United States) during the last quarter of the Nineteenth century. The various Western countries responded to the problems of making education suitable for the masses in highly characteristic ways. In France, the establishment of the Lycée by Napoleon was taken as a great forward step; the school for the nobility was to be made available for everyone who could qualify, and the reforms, such as they were, were intended to insure the even-handed application of standards of qualification by the government. In England, tax-supported secondary schools were late in coming, but the problem was seen in terms similar to the French: the development of external examinations would insure fairness in granting access to the limited number of "places" in the tax-supported grammar schools. In Germany, the response was the development of the widely admired system of German trade schools, in addition to the Gymnasium.

In the United States, the response was most explicit in the "Committee of Ten" (The Committee on Secondary School Studies Appointed at the Meeting of the National Educational Association, 1892: the report appeared in 1893). This report, often cited but less often read, makes two main points: that science should be emphasized in the curriculum in order to discipline the mind, and that the school should be the source of a universally-accepted American civilization. The first of these intentions reflects, of course, the faculty psychology of the day (about to be displaced by reinforcement theory); the second accounts for many of the excesses that plague the teaching of literature, especially, to this day. The report was highly effective. It set a mold for the curriculum that is still followed, in that it was explicit.

Why was the Committee of Ten's report so influential? Three reasons stand out: for one, it had the authority of the intellectual establishment behind it (President Eliot, the great popular representative of intellectuality, was its chairman and principle formulator); second, it was prepared at the request of the NEA, which was already very influential among the leaders of the public schools. Third, its recommendations were concrete, and closely related to a set of ideals everyone shared. The report probably was conservative in its time: it took full advantage of a discussion that had been under way for nearly forty years, led by Herbert Spencer and Eliot himself.

The Commission as an Innovative Form

Reform by Commission has been a prominent approach to educational change ever since; indeed, it had been long before 1893.[1] As a form, it has persisted. Its principle characteristics appear to be these: (1) a commission is chaired and staffed by highly prominent public figures; (2) a commission defines its work in the most sweeping terms; (3) a commission typically seeks to report to the public, not only to the professionals; (4) a commission usually, but not always, seeks to evolve a better policy on the basis of present policy--it rarely recommends concrete programs.

There have been dozens of such commissions since 1890. The best known and (in their various ways) most influential of them have been, in addition to the Committee of Ten, the Committee of Fifteen (1895?) on the Elementary School, The NEA Commission on the Reorganization of Secondary Education (1918), author of the once-famous Cardinal Principles of Secondary Education, and the Educational Policies Commission (the reports of which on elementary schools and secondary school, in 1938, are its principle contribution. The Commission was dissolved only last year.) Each ten years since 1930, a White House Conference on Children and Youth has been convened; the 1930 and 1940 Proceedings of these conferences were influential. James B. Conant's American High School has functioned like a Commission report, though in this instance it was Dr. Conant himself who was commissioned, by the Carnegie Corporation.

It is fair to judge that the Commissions have, with rare exceptions, reflected current opinion, rather than having led it. In the cases given above, the influence of the commission reports has arisen more from their summary character than from their innovative quality; they can best be understood as crystallizations of prevailing informed opinion. In those rare instances in which the report of the commission was concrete and programmatic, its influence on programs of instruction can be seen; this was true of some aspects of the reports of the Committees of Ten and Fifteen, and of the Conant report on the high school. Far more often, however, the effects of the Commissions are invisible in the schools, and it is appropriate to judge them as realitively ineffective means for innovation.

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[1] Michael Katz sees the reform movements of the Nineteen Century in harsher terms. "...the extension and reform of education in the mid-nineteenth century were not a potpourri of democracy, rationalism, and humanitarianism. They were the attempt of a coalition of the social leaders, status-anxious parents, and status-hungry educators to impose educational innovation, each for their own reasons, upon a reluctant community." (The Irony of Early School Reform, P. 218)

The Zealot as Reformer

Perhaps more influential than the Commission has been an individual zealot. Horace Mann was such a zealot; without him, the establishment of the universal elementary school would no doubt have been much slower. The sadness of his latter years was a product of the passion of his earlier years, for he like other zealots was ruthless and self-righteous in his pursuit of the moral good. William H. Kilpatrick was another such; he developed an incredibly large group of acolytes during the Twenties and Thirties: people who, during the Forties and Fifties, became increasingly rigid protectors of his values and programs. At present, the tradition of the zealot is very much alive in prominent figures like Zacharias, Keppel, and many others; it is greatly strengthened by the new educational press, as represented by the Saturday Review and the New York Times, for the zealots are individuals, not groups, and their qualities as individuals make them good and understandable copy. The cliché description of the educational zealot is, of course, that he is charistmatic. He is: he is bright, articulate, given to relating his educational plans to moral imperatives, disposed to make the existing scheme of things their enemy, and in general to make of educational innovation an adversary proceeding. He is often highly effective, though not usually for a very long time.

The fact that the zealot seems to produce more detectible change in schools than the other innovative forms is worth attention. The educational public is not, it would appear, given to the close analysis of problems, based on systematic evidence. It is far more prone to respond to moral imperatives than to examine alternatives; it is far more prone to follow leaders than it is to be critical. The level of public educational discussion is, and has generally been, distressingly low. The public is, therefore, vulnerable to demagoguery and quackery. The fact that the great educational reformers--the zealots--have not been quacks is, perhaps, testimony to the latent wisdom of the people. It does not testify to their rationality.

Imitation-competition

A distinction must be made between the development of innovations and their spread. It is implicit in the locally controlled, locally supported school system that the local official needs to appear at least as effective to his immediate constituency as other "comparable" and neighboring school systems. This dynamic has often been noticed, and has led to such plans as the network of R & D centers in New York State, the networks making up the Metropolitan School Studies Council and the other School Studies Councils, the more recent network of Kettering schools, the Education Laboratories of the USOE, and so on. Ever since someone called attention to the success of the county agent, the USDA model has been applied to the problem of dissemilation of educational innovations.

What has not been noticed so often, however, is the nature of what disseminates in these circumstances. As Thorndike pointed out in his original studies of transfer of training, it is the identical elements that disseminate, not the rationale, and certainly not something as elusive as an "experimental climate". Ability grouping spread all over during the Twenties, but not individualization. "Block" programs (typically, blocks of time devoted to two or more school subjects, as English and Social Studies) spread rapidly, but not the more complex ideas behind Kilpatrick's "project method." In general, it is form, not substance, that transfers through imitation-competition. Currently, team teaching and the ungraded school transfer well, and until recently gave the local administrator a competitive edge in the scramble for recognition; a few years ago it was language laboratories. The dynamic behind the network strategy as a plan for dissemination of innovations does not, it would seem, lead toward local modification of the innovation, but rather toward local copying of it; moreover, the innovations thus copied tend to be adopted at their most superficial level. The main goal of such imitation-competition is recognition by press and public, but both are notoriously gullible with respect to educational matters.

Nevertheless, within these limitations, the dynamic of imitation-competition is potent, and it accounts for much of the actual change in U. S. school systems.

Teacher Education as an Innovative Strategy

Although it is a commonplace to observe that the patterns of professional pre-service training are usually ineffective and sometimes obstructive to change, little organized attention has been given to either changing the patterns or examining the assumption that they are as bad as they seem.

There are at least two examples of teacher training to change teaching. One of these is old: around 1900-1910, teachers were rehearsed in conducting recitations; around 1925-1940, they were given explicit instruction in certain aspects of child development. Both were effective. The training of the turn of the century took the form of detailed prescriptions of questions and answers. The teacher's lesson plan consisted of such questions--perhaps twenty to twenty-five for one lesson. The format was not unlike programmed instruction. The plan was widely used; it seemed at the time to be brisk and modern, by contrast with the memorize-and-recite methods then in vogue, and ridiculed by such as Dickens and Mark Twain.

More recent, more subtle, and more memorable is the Child Study movement. It was during the Twenties that systematic studies of child development reached a point that made application in the schools practicable. In these years of the Progressives, the climate favored such an emphasis, and it found its way into teacher education programs in the form of laboratory-centered courses in child growth, with considerable emphasis on clinical data and direct observation. A bit later, Daniel Prescott led in the development of a three-year in-service course, which he and his assistants conducted in public school systems all over the country from about 1945 until about 1960 (the program is still offered by Prescott's Institute of Child Study, now at the University of Maryland). The programs were both highly effective. The persistence of a child-centered view of schooling among elementary school teachers may be attributed to these programs; the tenaciousness of this view among teachers over 40 years of age arises directly from the fact that they were powerfully taught to observe and interpret children's behavior for themselves. Before Zacharias formulated the idea that students should learn to "think like physicists", the Child Study people had inducted tens of thousands of teachers into the art of thinking like child psychologists.

Other attempts have been less successful. It is a commonplace to ridicule Education professors who teach active methods in a passive classroom; who lecture about the importance of discussion; who teach didactically the importance of inductive learning, and so on. The ineffectiveness of such teaching, if one is to evaluate it by examining the subsequent performance of those subjected to it, is notorious. Less obvious than its ineffectiveness is the reason for its persistence.

Two reasons have appeared in recent speculations; while they do not wholly explain the phenomenon, they may explain it in part. First, Education departments are organized as if they were academic departments, and Education professors therefore try to act like their academic colleagues. In the struggle for respectability that characterizes all Education departments, the faculties have responded by making courses that look and sound like courses in History, or Literature, or Economics. Academic courses are taught in a highly traditional fashion, as we all know from our own experience. Only in the laboratory sciences is the student compelled to deal with real data--and only in some of them.

Second, Education, unlike Psychology, is not an organized, inquiry-centered discipline. To use "laboratory methods" in Education would require students to plunge into the educational endeavor with very little in the way of guidance. Observation methods and intellectual paradigms are only now, and only in a highly preliminary form, beginning to appear.

To make teacher education function well as a source for innovation, therefore, at least two conditions would have to be met: teacher education would have to become reality-centered, and it would have to be freed from the requirement of academic respectability as controlled by the traditional university departments. Where these requirements are being met, as they are in a small number of the newer programs, one can expect teacher education to produce students disposed and equipped to innovate.

Research and Innovation

It has become fashionable once more to diminish the importance of educational research as a means of change. The newer "action" programs proceed from the assumption that educational research has produced nothing useful, and that it is unlikely to. Like any such indictment, this one contains truth. But the alternative suffers from its own difficulties (see section on Zealots, above). In any case, it overlooks at least two striking examples of research that has, indeed, had a widespread effect on practice.

One of these is the research on child development and its application and redevelopment in the Child Study Movement (see above). The other, rarely noticed during recent years, is the research on vocabulary carried out during the first and second decades of this century, and its effect on the readers used in the schools.

One need only examine the readers used most widely in 1870, 1915, and 1930 to see that a profound change in approach has taken place. In 1870, the McGuffey Readers were still used widely in the United States; they were a direct outgrowth of the moralism of the New England Primer, with a heavy overlay of the chauvinism of the mid-Nineteenth century. By 1915, an altered conception of childhood led to an emphasis on fantasy, with a certain amount of somewhat precious poetry as an admixture. But by 1930, they had been wholly altered by the introduction of the findings of the vocabulary studies of the Teens and Twenties. The Dick and Jane series, like the Gates Readers, the Betts Readers, the Ginn Readers, and the other Basal Series, had their content made over to fit the notion of the controlled vocabulary. While one may not approve of this development, its potency cannot be denied, nor its root--research on vocabulary development.

It is important to point out something obvious: when the research was directed at teaching materials, it was almost instantly effective. The current criticism of research deals, not with the research intended to effect the materials put in students' hands, but with the research intended primarily to improve theory.

The Task Force as an Innovative Strategy

Once a policy has been decided on, some implementation is required. A typical form for implementation is the task force. Among those most widely known now is the group that produced PSSC Physics. Like the other groups supported by the National Science Foundation, this one was to undertake its work in a single-minded fashion, and it did, with results that we have all witnessed. As a form, the task force has been used many times. It is interesting to consider the earlier experience of the form, perhaps thus clarifying the difference between the NSF curriculum groups and their many predecessors.

The hope for a Science of Education was brightest during the Twenties, when a combination of the new objective test, efficiency engineering, and the microscopic studies carried on by the psychologists made it seem possible to separate Nature from Nurture, and to design Nurture scientifically, as if one were developing a new crop, or designing a new form of line production for tires or home appliances. Buried deep in the professional unconscious of the educationists is the memory of the naive effulgence of those days, never reached again by them, though often echoed in the more vainglorious claims made by the reformers of the Fifties.

One reason for the optimism of those times was that the new Science might liberate the local educationists from the prevailing authoritarian tradition of educational reform--reform by prestigious Commissions, reform by Zealots. The beginnings of the notion of Democratic Curriculum Construction, a notion that persisted until the early Fifties, were in this earlier time. These beginnings took the form of task forces at the local level. In hundreds of school systems, committees of local teachers were released from classroom duties for as long as a year in order to write courses of study appropriate for their own communities. These courses of study, frequently detailed and long, were issued first in a preliminary edition which was circulated for trial and criticism, then revised and printed, with the intent of periodic revision. "Curriculum laboratories" sprang up in several places, notably at Peabody and at Teachers College, Columbia, where these documents were collected and studied closely. The "laboratories" grew very large--and then the whole movement collapsed, because it became apparent that classroom teachers were ignoring these big, expensive documents, unless they themselves had been on the committees that produced them.

These documents typically consisted of detailed statements of objectives, supported by recommended learning activities, materials, and references. They were the nearest thing to a detailed, prescribed, automated course one could imagine: the beginning teacher needed only to open such a course of study to page 1, ("motivation"), and begin. With only slight modifications, such courses could be made to conform to the Dalton plan ("Contracts"), and one had a form of individualized instruction.

Hindsight suggests why the form has been generally abandoned. First, it was often carried out in a slovenly fashion, or merely assembled from several other courses: it was, considered as a document made to fit local needs in some unique way, a fraud. Second, it presumed an untrained teacher, though it did not admit its assumption to itself, let alone the teacher at whom it was directed. But it did not seek to train the teacher in its ways, and the very form of the document required that the teacher use considerable discretion--for which she was not trained. Third, the documents were usually so "down to earth" and local in tone that they carried little authority. The teacher had the feeling (and she was supposed to) that she could have done as well herself, given a little time. Fourth, the objectives that dominated the documents were of all sorts and kinds; little attempt was made to sort out the trivial from the significant, or the behavioral from the statement of principle. "Good citizenship" became "picks up litter from the street": a behavior, to be sure, but one that cannot really be taught in school, and if exhibited, cannot really be attributed to schooling; and in any case, a poor surrogate for "good citizenship."

The principle criticisms of the Course of Study Movement, then, are that the actual courses of study (1) lacked authority, (2) were frequently slovenly, (3) lacked a coherent theory of their teacher-audience, and (4) failed to deal adequately with the problem of objectives. They couldn't be used as formulated, though they were frequently useful as sources of clever teaching ideas. So they failed, and gathered dust in classroom closets--where many of them still are.

In contrast, the NSF curriculum projects carried great authority, included a provision for teacher training, were very carefully prepared, rose above the common sense of teachers, and were fairly explicit concerning objectives. They did not, of course, seek to deal with unique local needs, nor did they seek to provide strategies for local adoption, trial, or modification. This failure may account for some of the difficulties now becoming apparent as the programs are widely adopted.

Innovation by Law

Since the public schools are political entities, the law under which they exist can be thought of as the source both of their stability and of their change. To do so, of course, presumes that the law reflects prevailing custom and belief; to use the law to innovate in instruction, one must therefore begin with prevailing custom and belief. In education, as in other fields, when the law does not reflect the convictions of the people, they ignore it. Since laws concerning the curriculum typically reflect special pleading of some kind, and are not usually "major" legislation when they are passed, they have often been ineffective. School officials are deeply suspicious of mandated curriculum provisions; they are given to pointing out the many howlers in state curriculum legislation, such as the infamous "spirit of '76" bill in Ohio's 1955 legislature, which forbade the teaching of "communism, sociology, or economics" until after the students had been taught the Constitutions of the United States and the State of Ohio. Schoolmen often ridicule the fact that the only mandated school subject in many states is Physical Education.

The most effective educational legislation is either permissive, as when funds are allowed for a local experimental program, or administrative, as when a state framework for experimentation is supported (as in New York). When a law tries to deal directly with an educational objective, it runs afoul of the general problem of stating objectives, and is ordinarily interpreted in such a way as to make the objective meaningless. If reinterpretation is impossible, the law is ignored.

Current Thinking About Innovation

While serious work is being carried on concerning innovation in education, the present state of affairs is best characterized as incomplete and spotty. One of the better attempts at formulating the beginnings of a theory of educational innovation is contained in Miles' Innovation in Education, compenduim of case material and theoretical formulations. Miles (chap.1) attempts to deal with the many attempts at innovation since the Thirties according to the comprehensiveness of the strategies they represented. For an innovation strategy to be comprehensive, he suggests, it must make explicit provision for adequate design, the development of local awareness-interest, local evaluation, and local trial; the initiator of the strategy must know where he is in relation to the target system (the system to be changed: he is either within the target system or out of it; he is working with a new structure, or with an existing structure. Using the matrix these elements provide, Miles offers a large number of illustrations of limited and comprehensive strategies to support his larger point: the more comprehensive the strategy, the more likely the innovation is to succeed--where success is defined as actual institutionalization within the target system.

Much of the current discussion of strategies is organized around a flow-chart model: an idea originates somewhere, it is field tested, modified, "tooled up," and adopted. Some models provide for feedback, some (like Brickell's) assume a distinct role of difference between having ideas and applying them, and propose organizations accordingly. Others, like the Guba-Clark model, make feedback central to the design, as does the now-forgotten Action Research model.[1]

Perhaps the emphasis of these models can be summed up this way: an effective strategy for educational innovation must be comprehensive, integrated, and subject to change. It must recognize the public-political nature of the school system. It must also proceed from the outside of the system in, and from the top down (see Daniel E. Griffiths, ch. 18 in Miles, op. cit.) It must enhance, not violate, the feelings of self respect of its clients in the target system.

Like others, Griffiths calls attention to the hierarchial structure of the public school system. As he sees it, the system handles power in a highly authoritarian way, and there is therefore little point in assuming that innovations can move upward through the hierarchy. If his point is accepted, it follows that anyone in the system who undertakes an innovation must perforce move out of it. When a Curriculum Director, for example, tries to make a change in the system, he is immediately considered alien to it by the school administrators; his alien status must continue as long as he attempts to innovate. This reality has led to great confusion in school systems: on what terms, one asks, is the alien innovator to be readmitted to the system? Isn't it better to bring in a real outsider, who can leave the system without pain, than to make an outsider of someone from inside?

ES '70 as an Innovative System

What can be said of ES '70, on the basis of this review of conventional wisdom and the beginnings of theory? We shall attempt here to draw together the implications.

1. ES '70 as a network

Clearly, ES '70 is more like one of the networks of schools than it is like any of the other forms for innovation described above. So considered, it must be judged incompletely developed. The Thirty Schools of the Progressive Education Association's Eight Year Study were also a network--but the attempt to innovate through these schools did not succeed, if one is to accept Redifer's evaluation of the early Fifties. What happened instead was the creation of a large, informal sub-society of the converted, who spread their influence as individuals when they moved from place to place. But the network of schools, as such, had little influence beyond what the individual schools had already brought to the experiment.

The ES '70 network risks a similar failure, in the absence of explicit provisions for transfer of what is learned to other schools.

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[1] See sketch of the model by Kenneth D. Benne and Hubert Evans in Smith, Stanley, and Shores, p. 644.

2. ES '70 as an integrated strategy

It is necessary to distinguish between a strategy and a plan. A strategy for innovation is intended to produce innovation; the present state of affairs in ES '70 consists of two main elements: a plan for designing changes in instruction, and a plan to make of the Network a viable organization. Neither of these plans is, of itself, an innovation strategy, much less an integrated innovation strategy.

To be integrated, a strategy has to be comprehensive, in Miles' sense, and capable of feedback and alteration from any or all of its elements. ES '70 is comprehensive in conception: designs are being developed (the "specification of objectives" projects); local awareness interest is being developed, probably, in most of the Network schools; local evaluation is envisaged, as is local trial and adoption. For this comprehensive plan to become an integrated strategy, however, it would be necessary to make explicit provisions for feedback. The present PERT chart is no substitute for such provisions, although it indicates some point at which such feedback would be required.

3. ES '70 as a hierarchical structure

Following Griffiths' point, ES '70 should consider itself as alien to the school systems it seeks to change. As an alien structure, it has its own problems of power distribution. The Council of school superintendents is probably necessary in order to make the Network politically viable; of itself, however, the Council could not in principle handle the problems of power and influence within the ES '70 central staff, which problems must be handled if the central staff is not to fly apart. The risk, as things stand now, is that the Council will be stable, and that the central staff will be unstable. To express this point as a criticism: the difficulty with the present ES '70 structure is that its central hierarchical structure is too weak.

4. The Authority of ES '70

Even though the strategy of reform by commission (see above) has had indifferent success, the fact that education is popularly viewed as a moral enterprise implies that some authoritative voice has to make the moral point if the innovation is to carry well with the public. Commissions ordinarily seek to make such a point. While it does not follow that ES '70 should now seek such a commission, the question of the authority of ES '70 as a voice seeking fundamental change in secondary education remains to be faced. So far, ES '70 has been in the main a technical affair, concerned with the feasibility and coherence of its own ideas. What is missing is a publicly understandable moral imperative. Until this condition is met, it is predictable that Congressional committees, as surrogates for the public, will continue to probe concerning the significance of the project as a whole. What is required is not a PR effort; a brochure will not do the trick. What is required is some legitimate US equivalent of the English Royal patronage. Conant provided such a voice for his project; the Council for Basic Education recruited certain members of the intellectual establishment; so did the Progressive Education Association in its time. Who can speak for ES '70?

5. ES '70 as Applied Research

Certain efforts have been made to bring existing research in the social and behavioral sciences to bear on ES '70. There are some fundamental limitations in the research itself, however. If ES '70 is to enjoy the success as an innovation of the reforms in reading of the 20's or the child study movements of the 40's and early 50's, it will have to apply some integrated body of knowledge. But knowledge relevant to ES '70 is not integrated. The plan itself is so all-embracing that it is not possible to refer to any single body of knowledge that encompasses it.

What follows from this is that ES '70 would do well to stay in the closest possible contact with the researchers relevant to its many purposes, to the end that it remain at a "state of the art" level throughout its existence.

6. ES '70 as an expression of professional and public consensus

The success of the Committee of Ten and of the Child Study Movement, and the widespread influence of the early Educational Policy Commission statements, all depended in considerable degree on an underlying consensus among members of the public and of the profession. If ES '70 is to take advantage of such a consensus, it must seek one. So far, the gestures toward the professional associations have been perfunctory at best; the inclusion of the state commissioners of education in the plan came almost too late. The professional associations are suspicious, given the abuse ordinarily heaped upon them by innovators, that projects of the ES '70 kind will be accompanied by more abuse, and will function to diminish and scatter the professionals. This suspicion can be reduced, if not removed--but specific measures toward this end have to be taken. Unless one seeks their hostility, they must be involved.

I have attempted in this memorandum to sketch the principle conclusions contained in the lore and conventional wisdom of curriculum development, together with my impressions of what is applicable from the emerging theory of educational innovation. A few direct implications for ES '70 have emerged from the analysis.

ES '70 is the most broadly and comprehensively conceived attack on the problems of secondary school education since the Thirties, and perhaps since the Nineteenth Century. Because of its sheer size and comprehensiveness, it raises every question there is in Education, including all those having to do with innovation. My attempt here has been to point out those risks that seem apparent to an experienced curriculum man, and possibly less obvious to others. I have not exhausted the list of risks, of course. They are numerous, and they are of course not all obvious to me. ES '70 goes well beyond anything we know with certainty.

Less this memorandum be misunderstood to be a warning concerning the importance or viability of the project as a whole, I feel bound to indicate the principle strength of the effort, as I see it. That strength is in the governing idea: that productive work can be taken as the central art of education, and that the approach to instruction and the structure of the school can be made to respond to its demands. So viewed, ES '70 is the most purely educational reform of any size to have been undertaken in many generations. The purpose of these remarks is to assist in making it work.

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PART TWO - THE THEORY AND PRACTICE OF PLANNED EDUCATIONAL CHANGE

Chapter III - The Education Change Process: Guidelines and Pitfalls with The Research Utilization Conference: an Illustrative Model appended
by Ronald Lippitt

Chapter IV - The Linking Agency: A New Force in Educational Management
by Lewis Rhodes

Chapter III

THE EDUCATION CHANGE PROCESS: GUIDELINES AND PITFALLS

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I. Complex Challenge of Change for ES '70

In the final pages of his excellent statement on "ES '70 as Curriculum Innovation", Welles Foshay has formulated some of the issues of change effort for the ES '70 project. He has indicated the challenge and the problem of ES '70 functioning as an interdependent network of schools with a mission not only of support and development of educational change within the network but the more difficult and major responsibility for the transfer of what is learned to other school systems. He has indicated that the stimulating educational innovation within the network does not necessarily imply the development of an integrated education strategy nor a momentum of educational change in the secondary school systems of the country. Foshay has also pointed out astutely that federal and state sanctioned support for the use of ES '70 resources is not likely unless the leadership teams at the federal and state level focus on their own functions and strategies as leadership teams. A third basic challenge pointed out by Foshay is the necessity for involving key sectors of the educational profession and the enlightened public in the development of understanding, consensus, and support for the change effort. And finally Foshay points out that an effort at educational change, in a society that is itself rapidly changing, must establish continuing mechanisms of changeability or self-renewal as a central part of a total effort. These challenges Foshay derives from his review and analysis of the major efforts at educational reform in our past.

It is the purpose of this section of the report to draw on the research about the theory and strategy of planned change. We will try to derive some of the most effective directions of effort to cope effectively with the challenges formulated by Foshay and the complexities existing in our current educational scene, with an eye to current trends of change in the larger societal picture as well as the structure of American education.

II. Organizing a National Change Effort

Organizing a national change effort, such as ES '70, involves much more than "thinking nationally." The framework of conceptualization, of strategy, of planning, and operation of the design must be formulated vertically and horizontally in terms of interlocking or interdependent systems of educational administration and program. Although the payoff of the total project will be in terms of the learning opportunities and the learning activities of individual young people in local communities, a plurality of educational resources and influences must be mobilized, maintained, and continuously revised if the ES '70 experiment is to have a broad and deep impact on American secondary education. Interlocking planned educational designs need to be developed and maintained with the following foci:

1. A national leadership team or change agent team must be developed as part of the federal educational enterprise. The team must have its own clear goals, its division of labor structure, its step-wise plan, its design for the utilization of research resources to help it in its own efforts.

2. Because the educational resources of the society and the local community extend far beyond the boundaries of the formal education system, it is also crucial that the federal leadership team develop liason and collaboration at the horizontal level with other major educational forces in both the public and the private sector. This co-ordination of effort at the national level might be thought of as the "horizontal mission" of the federal ES '70 team, as contrasted with the "vertical mission." The vertical mission links the national level effort with the local effort. The educational community of the child includes some seven different sectors of personnel with educational vested interests at the local community level, and with counterparts nationally. The school system is only one of these seven vested interests; it has the potentiality for taking a leadership role in mobilizing and co-ordinating the other important influences of the socialization and education of the young. (See Chapter 8, "Improving the Socialization Process", in John Clausen, Socialization and Society, Boston, Little Brown and Co., 1968.)

III. The Vertical Mission of the National Team

The vertical mission of the national team involves the development of a leadership role in relation to a group of linking individuals who can and do link national, state, and local parts of the development effort. This is quite different from the notion of having teams functioning at the different horizontal levels of the school system network, the collaborating state levels, and so forth. A linkage team is a vertical team involved in the collaboration and co-ordination between the levels of change effort which are initiated and maintained.

Increasing the role of the state level of the educational system will be a crucial part of planned change efforts in the field of education. This includes leadership of the state education departments, the various state levels of professional societies, the state universities, and other teacher preparation institutions. For educational dissemination of innovations to take place within a state requires stimulating a new type of state level team which has not yet come into existence anywhere. In a working memorandum to the leadership of the Office of Education, we have described this team as consisting of representation of the state departments of education, the state professional societies and associations, state level youth serving agencies and programs, the state university systems, and of state level interests involved in the economic and political socialization as well as religious education of the young. The development of state level teams on youth education and development would be the single most important mechanism in sanctioning, supporting, and disseminating innovations of the ES '70 program.

Horizontal collaboration at the level of local school systems involved in ES '70 is a crucial basis for support for both innovation and dissemination.

Vertical and horizontal organization in the local school system is the final and crucial linkage to the educational process in the classroom. A number of dimensions of organization are required within the school system. One is the horizontal team of teachers involved in innovative effort. Another is the vertical organization of supportive personnel from the central office, the administration of the school building, the innovating teachers, and representation of the youth. For purposes of both feedback and sanction it is crucial that youth representation be involved in the developmental and evaluative work at the local school system level. It is also crucial that the superintendent and the board of education take initiative to develop some horizontal collaborative teamwork with other sectors of the community outside the school system--not only parents, but also some of the other major sectors of the community which have educational and socializational functions of the type we have defined in our writing on the socialization community.

These then are the foci for the planned change efforts which need to be mobilized and linked in order for ES '70 to become a successful stimulus for innovations and an effective basis for the dissemination of the successful innovations to the state and national educational establishments.

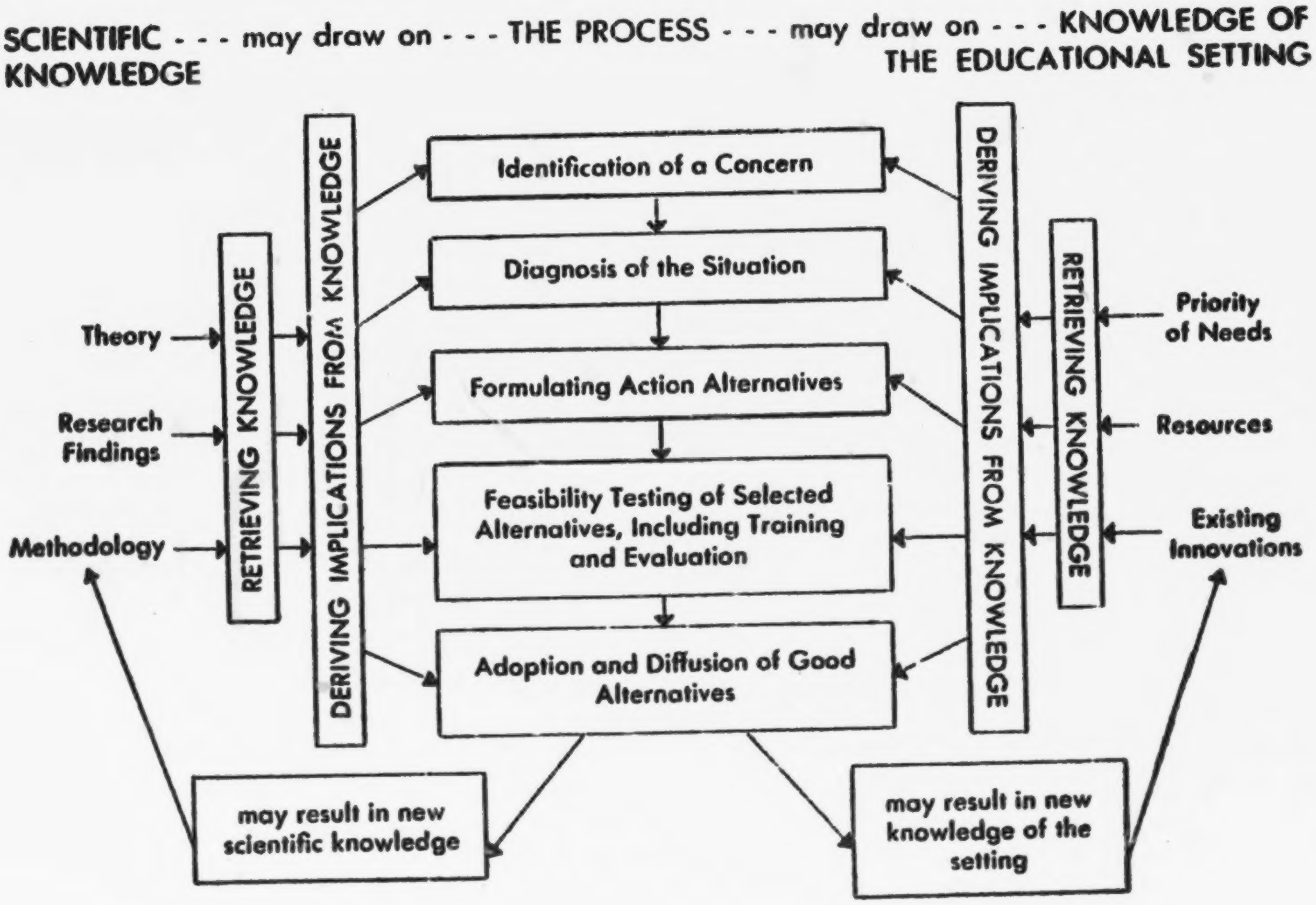
IV. The Process of Change Effort

Each of the foci of change effort identified above should be regarded as the focus of planned change effort or problem solving process. The guidelines for organizing and implementing such a problem solving process are suggested in the diagram on the next page, entitled "Knowledge Utilization for Educational Improvement Efforts."

Let's look in detail at the elements and flow of this model. Because of our development and testing of it, it seems to provide a sound general framework for organizing effort of educational innovation and dissemination at any level of the educational establishment. In other words, we believe it is just as relevant as a guiding framework for the national leadership team in the federal office as it is for the innovating teacher working with her classroom group.

Down the center of the diagram is the flow of the problem solving process involved in working toward some change in educational process or educational structure. The left side of the diagram indicates that during this problem solving process, external resources of help are needed which must be retrieved from outside the particular group or educational system

KNOWLEDGE UTILIZATION MODEL FOR EDUCATIONAL CHANGE


SCIENTIFIC KNOWLEDGE
may draw on
THE PROCESS
may draw on
KNOWLEDGE OF THE EDUCATIONAL SETTING
Theory
Research Findings
Methodology
RETRIEVING KNOWLEDGE
DERIVING IMPLICATIONS FROM KNOWLEDGE
Identification of a Concern
Diagnosis of the Situation
Formulating Action Alternatives
Feasibility Testing of Selected Alternatives, Including Training and Evaluation
Adoption and Diffusion of Good Alternatives
DERIVING IMPLICATIONS FROM KNOWLEDGE
RETRIEVING KNOWLEDGE
Priority of Needs
Resources
Existing Innovations
may result in new scientific knowledge
may result in new knowledge of the setting

carrying out the problem solving effort. The diagram indicates that resources may be educational theory, or findings, or innovations discovered elsewhere, or diagnostic and evaluation methodology, or human resources such as expert consultants. From all these sources, knowledge can be received from which can be derived implications for a particular problem of educational change.

Not all the important resources needed for change effort are outside the system. Many are available for retrieval from within the particular classroom, school building, school system, state system, or federal team. These internal resources include diagnostic data about readiness to change and resistance to change, various special manpower resources within the group, various existing innovations already developed, and the procedures for collecting evaluative data about the success and progress of current efforts.

Frequently the problem solving process may start with an effort at retrieval of research findings in a particular area of concern in order to derive the most relevant directions for innovative effort. An example of this approach can be found in the brief description of research utilization conference conducted as a demonstration with part of the ES '70 leadership team and appended to this chapter.

Quite a different type of start up for the innovation development effort is to begin with an internal survey confronting educational problems that the practitioners are most concerned about. This census of "points where improvements are needed" begins the problem solving effort, with the retrieval of internal knowledge (see right hand side of the diagram) as contrasted with the retrieval of knowledge or theories or innovations developed elsewhere.

It has been our experience that working through the meanings and strategies of this schematic representation of the process of planned change can provide flexible and systematic guidance for planned change efforts. It is important to note that the two final phases of the problem solving process as indicated in the middle of the diagram are oriented outside of the innovating system. The step indicates that a significant part of the problem solving effort is the dissemination of one's learnings to other systems and the assistance in adaption of the goals and practices which have been developed and tested.

We also note that two kinds of payoff may result from this planned change effort. One result may be the mergence of new scientific knowledge about the content, process, or structure of education which feeds into the stockpile of knowledge available for future use, as indicated in the flow of knowledge to the left hand side of the diagram. Also we note that a payoff from the problem solving effort may be new resources within the system itself. New resources of diagnostic data or of more skilled manpower or of innovation for further use within the system.

Let us look now at some of the traps and some of the strategies of successfully using this type of planned change model.

V. Strategies and Traps in the Planned Change Process

We believe there are three priority questions of strategy in designing and conducting local change efforts: balance and integration in the utilization of inside and outside resources; the timing and techniques of blending task work and process work for maximum productivity; and the securing and utilization of feedback data on a continuing basis. Let us examine each of these strategic questions briefly:

1. Inside-outside resource use

There is a growing consensus among change agents in the field of organizational and community change that change can be most effectively initiated and supported if leadership is provided by a change agent team composed of personnel from inside and outside the target system. In the current literature this is sometimes referred to as the "temporary system team" or the "inside-outside team." The outside team members are typically able to contribute objectivity and status and linkage to a network of outside resources. The inside members of the team are able to provide the crucial elements of diagnostic sensitivity, linkage to the crucial network of internal sub-systems, feedback on process and resistance to change, and crucial data about the existence of norms and expectations of the system. By working together as a temporary team which has the objective of providing an effective change agent resourcefulness for the system, and at the same time transferring the resources of change agentry more and more to the internal system as time goes by, the inside-outside team can be a major resource far beyond what can be accomplished by insiders working alone, or outsiders attempting to come in and exercise their expertness on the insiders.

2. Task work and process work

The current controversy about the relevance of sensitivity training or T-groups has tended to cloud the most important insight lying behind the development of sensitivity training activity. The key fact is that much of the work done by human beings in collectivities, whether they be committees or staffs or commissions or families is very wasteful and unproductive because of underlying human relation issues which prevent open communication and co-operation rather than competitive interaction. The critical question is then, how and when to introduce "process inquiry periods" into task work in order to take a look at issues of miscommunication and hangups in personal relationships that may be blocking effective work. Other innovations include the use of a work process observer given the task of regular feedback, or the use of quickly processed anonymous questionnaires. It is clear that any effort at collaborative work on the problems of change and resistance to change will involve a great many difficult problems of communication and collaboration. Some type of approach to the question of integrating task and process work is a crucial requirement for the successful effort.

3. Feedback and feedback about feedback

Any effort as complex as the process of attempting to introduce change into educational practice must be guided continuously by the securing of data about the reactions and responses of the people who are involved as targets of the change effort, or as collaborators in the change enterprise. But one of the interesting problems that frequently arises is that those who administer feedback or evaluation questionnaires may review the data carefully and learn from it but neglect to share with the sources of the data what they learned from it and what they are doing about it. This has the frequent result of leaving the data-givers to conclude that they have not been listened to and that they have no influence in guiding the change agent team. They therefore become less and less willing to give valid data. And they become more and more resistant to influence from the change agents. Thus it is crucial that the feedback cycle which guides a planned change process be one in which feedback is given on what was learned from the feedback and how it has been used.

If these three strategies of change effort are kept in focus by the change agent teams, many difficulties will be avoided and productive consequences of change effort are more likely to follow.

Let us look briefly at some of the traps which planned change efforts fall into as they make educational improvement efforts:

1. "We have decided on that. It's under way."

   One of the difficult traps for administrators or personnel up the line in federal and state offices is to assume that the job has been done when policy decisions about new program actions have been made and the responsibility has been delegated. Development efforts must not only be sanctioned but also guided, supported, evaluated, and revised. Fairly typically those to whom effort has been delegated have not been involved in the policy decision and overall planning so there is relatively low commitment to the effort.

2. Doing is not enough.

   For an innovation to be qualitatively significant and successful requires much more than vigorous activity. Personnel need to be involved in helping to conceptualize the plan of action. They need to help think through what skills will be required for the new type of innovative activity, and they will need to have the in-service training required to develop the skills demanded of the roles they will fill. Time for thinking and planning and training are often neglected as priorities in the operational eagerness to "get going."

3. "We're proud that we're doing new things."

   The field of educational innovation is full of the pride that went before the fade-out. Every participant in the activity--administrator, teacher, youth--must be involved in achieving hard headed clarity about the potential role of the proposed new effort. Often doubts and cautions about the new idea are taken as signs of bad motivation and of resistance to change. More often they represent legitimate cautions--a realistic testing and inquiry as to the relevance of spending time and energy on something new.

4. Vested interest

Another very frequent, and often very disastrous trap, is that the improvement effort becomes the vested interest of a small cluster of individuals. Very often their commitment and energy and involvement become the basis for alienation from colleagues--a basis for threat and distrust.

5. Impatience with slowness

Frequently those who become involved and committed in the change effort become impatient with the lack of support for their innovation or improvement efforts, or the slow rate of progress. The more impatient and irritable the community of innovators become the more resistance they create in their colleagues against the involvement in and use of the new ideas that are being developed.

6. "We're already doing that."

A frequent trap in looking superficially at the innovative practices of others is to reject them as relevant because they appear to be like something one is already doing. Frequently educational practices that seem to have the same form or appearance are basically different in the type of learning opportunity provided and motivation stimulated in the learners. We are likely to resist and reject the resources of others for fear of admitting inadequacy. As a consequence we miss opportunities to build collaboratively.

7. "Temporary innovativeness"

As John Gardner has pointed out, the rate of change in our societal context is such that any innovation adopted as a specific practice today may be obsolescent in a very short time unless the innovation is imbedded in an organization or institution which has achieved the characteristic of innovativeness or changeability or self-renewal. One of the most frequent traps of change efforts is to become so involved in particular concrete efforts that there is a lack of perspective concerning the more important type of change effort which is to achieve the mechanisms and structures of changeability. We look at this problem in the next section.

8. What do we have to share?

In some ways the biggest trap is that of being so involved in our local change effort that we forget to develop the documentation and resources and evaluations needed to share our innovations with others. Every innovative effort needs to have built into it a "sense of history perspective" of what is going on. The single most serious problem of educational change is that most educational change efforts fall into this trap of "local-centrism."

VI. Developing Changeability or Self-renewal Resources

John Gardner has pointed out perhaps more clearly than any other national leader the basic difference between concrete effort to reform an institution or program and more long-range perspectives on installing procedures and mechanisms for continuing self-renewal. As Gardner notes, "As an institution builder man has a notable gift for making the same mistake over and over." He continues, "A first step towards a sound philosophy of institutional re-design would be to break the habit of concentrating exclusively on the routine repair of institutions....More and more, at this critical time in our history we must undertake an imaginative re-design of institutions.....That human institutions require periodic re-design (only because of their tendency to decay) is not a minor fact about them or easily overlooked. Taking the whole span of history, there is no more obvious a lesson to be learned. How curious then, that in all of history with all the immensely varied principles on which societies have been designed and operated, no people has seriously attempted to build a society which would take into account the aging of institutions and to provide for their continuous renewal. Why shouldn't we be the first society to do so?"

Gardner notes that the major problem of change agentry is that "each reformer comes to his task with a little bundle of desired changes. The society is intolerable because it has specifiable defects. The implication is that if the appropriate reforms corresponding to those desired changes are undertaken the society will be wholly satisfactory and the work of the reformer done. This is a primitive way of viewing social change. The true task is to design a society (and institutions) capable of continuous change, continuous renewal, continuous responsiveness to human needs. We are creating new problems as fast as we are solving the old ones. Our society must have a good problem solving mechanism. It is not so today."

If we look at the efforts of ES '70 with this perspective we must ask at each level of the change process the following questions:

1. What provisions are being made for building long range planning and periodic review into the design of ES '70 at the level of the local school system, the network of school systems, the state team, and the federal team?

2. What procedures and personnel have been established with the responsibility for continuous scanning for new relevant research knowledge and new relevant innovations, which would represent continuous resources for the self renewing school system and classroom?

3. What design has been developed for continuous in-service professional development of all educational personnel? Who has the responsibility for in-service training? Who has the responsibility for individualizing the career development plans of each staff member so that self-renewal can be a process at the level of the individual as well as the institution, for one depends on the other?

VII. Maintaining a Feedback Process

Who has the responsibility for maintaining a continuous and open feedback process between the larger community environment and the school system so that all the influences of the changing pluralistic society can be listened to and utilized as resources to the degree they are relevant? This is certainly a part of the challenge to ES '70 and to the change agent team in each school system--to be creative about the specific innovations, but more importantly to be innovative about creating within each school building and school system the resources and mechanisms for continuous self-renewal.

VIII. Sharing the Resources of Innovativeness

The existence of an active communication network between the innovating systems does not guarantee that there will be an effective exchange of innovations. The exchange of innovations in educational practice, unlike those in agricultural and medical practice, usually require significant changes in values and skills. These changes require deeper personal involvement in adoption and adapting the new practice. There will be more problems of resistance to change and relearning. In the field of educational practice there are significant features of adaptation in each adoption. One implication of this is that the dissemination of the new practice must include much more orientation of the potential adopters to the basic principles and conceptions involved in the practice in order to make creative adoption and adaption possible. Another fact is that the effort to adapt a new practice involves much more in the way of effort and risk--risk in terms of one's own self-regard and in terms of "raised eyebrows" of colleagues. This means that the individual teacher is usually not the appropriate unit for exchange of practices. Instead a team of colleagues will be needed to give support to one another during the period of risk taking and development of the necessary skills to guarantee success and continuity of the change effort.

For this reason it will be necessary to put energy into developing a significant set of innovations focused on the practice of sharing new practices. Some of our experience with the "exchange of practices institutes" indicates the need to help teachers learn to be open and adequate as informants for each other and to be skilled in probing and documenting practices which have been developed. We can expect therefore that one of the major payoffs in ES '70 will be the development of creative procedures for the dissemination and exchange of practices and the converting of these shared practices into materials and procedures to guarantee dissemination to the larger educational community.

THE RESEARCH UTILIZATION CONFERENCE: AN ILLUSTRATIVE MODEL

Ronald Lippitt[1]
Center for Research on the Utilization of Scientific Knowledge

This is a summary report of two brief research utilization sessions conducted for the U. S. Office of Education in response to a request for a two-hour micro-demonstration of the procedures of a research utilization problem solving process.

The participants, school administrators and Office of Education officials, were seated around work tables for six or seven. They were asked to act as teams of school administrators involved in considering the problem of whether and to what degree they should involve youth and parents in the policy making and operation of the school system.

Introductory Orientation

With so much ferment for change in educational systems these days, it is puzzling just how to go about identifying the needed resources to plan and carry out significant change efforts. There are several kinds of resources.

1. First, there is research based knowledge about the learning process and many aspects of functioning of school systems. This knowledge has been developed by teams of researchers all over the country in a variety of studies and projects which have produced important knowledge. Usually the questions focused on have not been the same as those the school administrator, or the teachers, or the parents have been asking. But much of the knowledge seems somehow to be relevant if it could be pulled together, summarized and looked at in the right way.

2. Then, in many educational development projects across the country there are innovative practices which have been developed to cope creatively with confronting practical teaching problems. Most of these innovations have not become visible or are not available in terms of documentation. It is quite unclear what would need to be done to adopt or adapt them appropriately to one's own local situation.

3. And, in addition, a great variety of diagnostic inquiry tools have been developed to provide a basis for fact-finding and evaluation of the particular efforts toward innovation in any school system. These methods are usually not available, and often some type of consultation would be needed to help in the use and the analysis of the methods and the data.

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[1] Subsequently the same format was used in a session with ES '70 personnel and was seen as a relevant approach.

4. Also, within easy reach of most school systems there are a variety of manpower resources which would be of great value in introducing and supporting significant improvements in the school system. But these manpower resources are usually not identified, and the school system is incapable of finding or using them.

The Center for Research on the Utilization of Scientific Knowledge at the University of Michigan is focusing on the study of the ways in which such resources of knowledge, practice, and manpower can be identified and actively linked to users in such a way that significant utilization will take place.

As the accompanying diagram indicates, there are in general two sources of resources. (See diagram) Many resources need to be identified and "brought in" from outside of the school system. These resources may be in the form of research knowledge, documented innovations, a directory of manpower resources, or diagnostic and evaluation instruments. We have illustrations of all these types of retrieval projects at CRUSK. Some of the exciting basic problems for research are to discover ways in which knowledge generated elsewhere can be assessed in terms of relevance to one's own local situation; ways in which research findings can be translated into usuable generalizations; ways in which innovations can be documented so that potential users are able to do a high quality job of adapting the model to their own operating situation.

The second type of knowledge resources already exist within the system and must be retrieved by appropriate diagnosis of the goals, needs, resistances and readiness for change of the participants within a school system. Other projects have developed procedures for identifying innovative practices within the system and also directories of internal resources persons relevant to various types of helping needs.

Our experiences indicate that knowledge utilization is a continuous part of the problem solving process, rather than coming in at some particular point, such as the beginning or the end of problem solving activity.

After reviewing these ideas and the meaning of the conceptual diagram which provides a schema for the knowledge utilization process we moved on to a micro-experience with the knowledge utilization process. The process flowed as follows:

Locating and Retrieving Relevant Knowledge

In this case the research utilization agent (me) without a request from a particular school system, made the assumption that many school administrators were faced with a common problem of uncertainty about parent and youth participation. Therefore, he retrieved from the ERIC Center at the University of Michigan, and from his own research files, some thirty studies which seemed to be exploring questions relevant to the school administrators' decision problem. From the summaries of these studies the consultant derived some eighteen generalizations which seemed to him to provide a valid and condensed summary of the significant themes of the findings of these studies. If a longer problem solving period had been available, such as a two or three day conference, a must fuller review of the studies could have been utilized and a much wider search for relevant findings could have been made. The generalizations utilized in this demonstration are attached at the back of this memorandum.

Review of the Research Generalizations

During a brief reading period the participants reviewed the eighteen statements and were asked to raise questions on issues of clarity, any challenges to thh validity, or generalization-range of any of the findings. They were also invited to propose any additional generalizations which seemed to them to be important and relevant from their knowledge of the field.

Making Implication Statements

One member of each worktable acted as a recorder while the total group developed statements of implication or derivation which seemed to them to follow from any of the research findings. These statements were to derive directions for change or action which seemed to be implied by the findings. Often, as groups begin this task, they have difficulty making a distinction between free associations to action ideas, and actual derivations from one or more of the findings. Usually it is important to help each table test themselves after they have derived their first few statements. At the end of the fifteen minute derivation period, each table reported to the others the one or two implication statements they felt represented the most significant insights and derivations from their table.

Projecting Images of Potentiality

It is fairly typical and natural, when ideas about directions for desirable change are stimulated, for participants to be flooded by ideas and feelings about the difficulties of change, the pain and resistance which would be encountered, the energy which would be required, etc. One reason for this preoccupation with "problem feelings" is that there is a lack of concrete images of the rewarding potentialities of achieving goal situations. Therefore, at this stage in the problem solving process we asked each individual, by himself, to get on a magic carpet and fly two years ahead to hover over their own school system, making observations of what was going on. They were asked to select from a two day observation period, observations of four incidents or episodes that made them feel very pleased with the way things had developed in regards to participation of youth and parents in the school system. These observations were to be very concrete, putting in quotation marks the things they overheard being said, and describing in detail the behaviors which they observed. Two of the episodes were to be of interactions between administrators, teachers, and students, and two were to be interactions between parents and school personnel. After about ten minutes of private meditation, participants at each table shared their images of desirable achievement and in discussion they selected the two most exciting images of potentiality to report out in a brief report period.

Brainstorming Alternative Possibilities for Action

During this period, with one of the members recording on a newsprint sheet, each table was asked to brainstorm all the alternatives they could think of for possible lines of action which might lead in the direction of their preferred images of potentiality. The rule was that there was to be no challenging of anybody's ideas but only questions of clarification, and no stopping for discussion. In ten minutes, each group had achieved a good list of fifteen to twenty-five ideas for alternative actions.

Selecting Preferred Courses of Action

Each table was asked to develop the criteria they needed to use for arriving at a judgement about the one or two most effective or appropriate courses of action from all those they had thought of. This meant that each group became involved in discussing issues of feasibility, significance, readiness, budget, necessary manpower, training, and other criteria. After they had generated criteria, they were asked to apply them in the selection and amplification of one or two most preferred alternatives for action among all the alternatives they had brainstormed.

Exploring the Force Field of Planning and Action

In a final discussion period, the table teams were helped to look at the beginning of the process of planning for change. They were helped to list the driving forces and restraining forces of a diagnostic force field. In other words, they were helped to list all those factors they could think of which might represent restraints or barriers to change in the direction of their preferred program of action. They were helped to see these as factors that might be within individuals or within the relationships between individuals or in the social system in which they are embedded. Then they were helped to identify the types of resources and support which might be mobilized to begin and maintain action in the desired direction. They were helped to see how this planning activity could move them ahead to making decisions about first steps of action, the organizing for action, involving the needed resources, development of the necessary training activities, planning of the needed feedback and evaluation activities that would provide continuous guidance for the change effort which would be involved.

SUMMARY COMMENTS

This micro-experience seemed to be enough to demonstrate the types of crucial linkages which are necessary between research knowledge and action strategies following from derivations from that knowledge.

It seemed necessary and possible to point out in the summary review of the session that various types of knowledge could be retrieved and utilized at various points in this problem solving activity. For example, the retrieved documentation of innovative practices could be fed in at the point where alternative possibilities for action toward the desired goals were being worked on, and retrieved information about available human and other types of resources could be fed in at the point where planning for change is being activated. It is also possible to point out that another whole body of basic knowledge becomes relevant for retrieval work at the point where planning for change begins. At this point the basic knowledge about planned change and resistance to change and the strategies and tactics of initiating and implementing change become a relevant body of knowledge for derivation work if a more complete program of knowledge utilization is to be conducted.

It is my belief that this type of research derivation conference or other similar types of knowledge utilization problem solving sequences provides one of the most significant settings and opportunities for basic research on the knowledge utilization process. It also provided one of the least threatening and most significant startup activities for entry into research and development relationships with a variety of social systems.

ES-70 Meeting
March 4, 1969
Ronald Lippitt

RESEARCH DERIVATION AND ACTION PLANNING SEMINAR

The situation: The school administrator and his staff are trying to think through the question of whether, and to what degree, students and parents should be actively involved in policy making, program planning, and program operation.

In order to think this question through they have asked help from an ERIC Center to scan for relevant resource knowledge that might help guide their thinking. The following generalizations from study findings and interpretive theory have been summarized.

In our limited conference time this afternoon we will work through a "micro derivation and planning process" as an example of the process involved in disseminating and utilizing knowledge inputs.

A Sample of Research Based Generalizations

1. A majority of high school students do not see student government as a significant channel of influence on the administration and operation of the school.

2. One study says the typical student is alienated from any significant contact with or commitment to the school as a community; another study of a different sample of high schools using different inquiry methods finds that superior students are highly involved, like their school and teachers, but their high involvement is "in the wrong aspects of life, i.e. getting good grades instead of having meaningful educational experiences... There is non-alienation in spite of triviality of work and powerlessness of role".

3. A significant number of student activists have high academic ability, a high motivation for education, and come from homes with liberal parents and high freedom of communication.

4. Negative attitudes toward school, teacher and learning are associated with low utilization of intellectual capacity in learning tasks.

5. There is a high relationship between self-perception of potency to influence one's environment and openness to learn from it (Douglas McGregor's generalization is: The child or youth is open to learning from the adult to the degree he perceives the adult as open to influence from him).

6. Perceiving self as barred from significant influence leads to two patterns of response, (a) withdrawal from involvement and commitment; (b) hostile attacks on the sources of power, either overt or covert.

7. In high conflict situations the conflicting persons or subgroups have a constriction of perceptual field so that they see few alternatives for action, and the more primitive alternatives of direct aggression are most available.

8. Voluntary involvement in decision making is highly related to degree of commitment to help implement the decisions or accept the consequences of the decisions.

9. To a significant degree the influential leaders in various segments of the peer culture are not involved in student government or other aspects of the official operating structure of the school.

10. Many teachers, particularly in lower socio-economic areas, see themselves as substitutes for inadequate parents and homes.

11. Large proportions of parents in most school districts do not see involvement in school programs as a relevant interest or possibility; few have ever had the experience of being asked to be involved in or connected with school operation.

12. Most school administrators and teachers do not see parents or students as relevant resources for collaboration in educational program planning and decision making.

13. Very few innovations have been attempted in the area of identifying, recruiting, and training youth power figures and parent power figures in the knowledge and skills of collaborative school planning.

14. The growing population of elder citizens are limiting the financial development of school programs by their voting against increases in tax support.

15. There is a high relationship between self-perceptions of power to influence and commitment of energy and responsibility to learn about issues, consequences, alternatives of deciding and acting.

16. The educational experiences of children, youth and adults almost never contain any curriculum offerings in training for social problem solving, conflict resolution, conflict management, the skills of creative compromise, etc.

17. The best predicitions seem to be that the youth power movement will continue to move down from higher education to secondary and elementary education.

18. The increase in leisure time and earlier retirement means that an increasing number of competent, vigorous elder citizens, male and female, have more time for volunteer work of some kind in the community.

Chapter IV

THE LINKING AGENCY: A NEW FORCE IN EDUCATIONAL MANAGEMENT

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I. Introduction

> ....."the ES '70 school administrator's task is analagous to that of the railroad engineer who must convert his train from steam locomotion to the more efficient diesel power .....but without stopping the train!....."

This excerpt, from a filmstrip about an unique educational venture, ES '70--the Educational Systems for the Seventies project, suggests the dimension of the problem with which the project hopes to deal: How to facilitate an effective process of institutional change which will start with a school's existing physical and personnel resources and permit it to evolve more relevant and appropriate means to support learning.

As this long-range project has been in existence less than two years it would be premature to attempt a significant evaluation. The fact, however, that it is one of the few major demonstrations in education of the meaningful, broad application of systems techniques provides a framework for a different kind of analysis. The use of systematic management approaches provides a capability for continuous assessment of present actions in light of overall objectives and needs. It becomes possible, therefore, to gauge the relative progress that current status represents at any point: to isolate factors apparently contributing to that progress or impeding it: and to project possible implications.

The following, then, is a look at what has been accomplished to date in this major attempt to deal (systematically) with a complex social problem. It is, moreover, a look at the process of change itself that is being developed and applied. The view of the process is from the vantage point of a new intermediary in the educational management process--a linking agency, the function of which is to develop the interactive ties between the many and varied elements of the complex educational process in order for them to be dealt with as a coherent system. It is from this unique perspective that the possible implications of what has been happening in the ES '70 process are projected.

II. Systems Approaches to What?

A. Present conditions

The times in which we live are marked by complex problems with partial, ineffective solutions; a world in which past experiences increasingly lose their relevance for dealing with current conditions; and increasing competition for the limited human, material, and financial resources that society is willing to provide--a competition which demands assurance that those resources that are being spent are being effectively utilized.

In education, for instance, the most heavily supported social agency, the taxpayer sees input costs rise--teachers are paid better, building costs increase, more materials are required--but there is no obvious change in output, i.e., differences in students coming out of the system.

The efforts that have been made to improve education over the past two decades have been marked with partial solutions developed in small scale, controlled environments which seldom could be applied to the larger reality of operating institutions. Moreover, the fragmentation of effort between education and the other institutions concerned with human development assured that the dimension of its approaches could not be adequate to the inter-related, complex nature of most human development problems.

It is no small wonder then that the reported "successes" of systems approaches for dealing with complex problems in the space program, in the Department of Defense, and in industry have created interest in their application in social areas such as education, as well. But with every voice of hope for the successful application of systems in social fields there have been equally loud expressions of fear and concern. The fear is that comprehensive planning and administration of anything on a large scale has to be mechanistically bureaucratic, oppressively controlling and eventually dehumanizing.

There has not been universal understanding as to just what systems approaches mean: To some the word "systems" means systematic--therefore, systems approaches are detailed step-by-step pre-designed attempts to solve an aspect of a problem. To others, "systems" suggests the idea of wholeness, therefore dealing with a part in light of its relationship to the whole and its purposes.

Systems concepts usually include the functions of systems analysis (what), systems design (how), and systems operation or management (actually doing). Of the three, systems analysis has gained widest acceptance in social institutions such as education. Properly applied, it provides a description of a problem that identifies all factors which affect an area of concern. Systems design, on the other hand, has not appeared as useful because, properly applied, it would require dealing with the multiple factors identified in the prior analysis. And these, traditionally, have been conceived to be outside the jurisdiction of any one social agency. In education, for example, while the results of systems analysis and other research have suggested that education is not independent of other systems in society, (e.g. family, community, work, mass media, etc.) the application of systems design has been limited to those areas that could be managed within the school alone, such as in the preparation of instructional materials.

The third element, systems operation or management, is the least applied because it must be the outgrowth of the effective utilization of the first two elements. Since the approaches attempted seldom have been of a dimension comparable to the complexity of the problems we face, there have been few instances that can stand as examples of effective systems operations in social agencies; effective, that is, in terms of dealing with the problem.

Some of the expressed concerns about systems applications in education appear to be generalizations made about early misapplications. By accepting the present operation of the school as the process to be facilitated, rather than as the starting point for the development of a new one, the application of systems thinking only served to take what might be, in some cases, an already mechanistically-operated, depersonalized situation and to make the resulting dehumanization more efficient.

Finally, there has been a failure im some cases to differentiate between systems theory applied to people-related processes, and systems theory applied to processes based on physical or mechanical laws where cause and effect relationships are easier to identify. Meanwhile, as the debate over technological processes has continued, the disparity between traditional curriculum offerings and educational processes on the one hand, and the current educational needs of the American population on the other, has also continued to grow. While this great ferment in American education has yielded a rich array of innovative practices designed to deal with one or another aspect of the numerous crises besetting our schools, the results overall have shown little in the way of significant improvement. In almost every case, the numerous interacting factors involved in the educational process have been dealt with piecemeal. Perceiving this, many thoughtful educators have begun to look for new means to deal with educational improvement on a more comprehensive and effective basis. The Ford Foundation, for example, through its widespread support of research and demonstration projects in education--including vocational-technical, guidance, and teacher education--has stimulated progress toward the renewal of the American educational system.

The search for more effective approaches has led many, in recent years, to question some of their earlier fears about systems management procedures. Could not these new planning and operating techniques being employed in other fields be applied to the conception and the development of a manageable environment--one which could be efficiently operated to provide maximum responsive learning opportunities? Could a social agency effectively apply its resources in a manner which would permit it to deal realistically with present problems while "retooling" and developing new procedures? If the medium is the message, i.e., if it is the process which we manage that affects the ends we desire to achieve, is it not possible to create and operate processes that are more humanistically conceived, that capitalize on, and preserve, individual variability and divergence rather than eliminate them?

B. Educational systems of the Seventies

It was within the context of questions such as these that in May, 1967, with much of the impetus coming from the Bureau of Research, U. S. Office of Education, a cooperative local-state-federal program was devised for the development of a new comprehensive secondary school curriculum and organization. This program, labeled an Educational System for the Seventies, or ES '70, brought together 19[1] local school systems and their respective state education departments, with a number of universities and foundations, and U. S. Office of Education departments interested in educational research and development.

Their primary goal, stated at the time, was "the re-structuring of secondary education to provide each student an education highly relevant to his experience, to his aspirations, and to the adult roles which he would play, and which would be economically practical within available public resources."

To do this it would be necessary first to have a model or goal of a more appropriate and effective educational system described in operational terms.[2] The process of reaching that goal, to be meaningful and generalizeable, would have to be developed around existing physical and personnel resources; and should make possible a more effective interaction between the abundant products of ongoing research and development and the practical expertise of the operating practitioner.

While this process of comprehensive change, which is the essence of the ES '70 development, would be a systematic effort in an area which has been largely unsystematic, it would not follow that it would be an attempt to dictate programs to the participating schools. The result of this process in each school would not conform to any restrictive mold since it would still be a product of local needs, objectives and resources interacting with relevant knowledge and tested procedures.

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[1] ES '70 Participating Districts, originally twelve districts, later expanded to nineteen.

Atlanta, Georgia
Baltimore, Maryland
Bloomfield Hills, Michigan
Breathitt County, Kentucky
Boulder, Colorado
Duluth, Minnesota
Ft. Lauderdale (Nova), Florida
Houston, Texas
Mamaroneck, New York
Mineola, New York
Monroe, Michigan
Philadelphia, Pennsylvania
Portland, Oregon
Quincy, Massachusetts
San Antonio, Texas
San Mateo, California
Willingboro, New Jersey
Chicago Catholic Schools, Ill.
Institute of American Indian Arts, Santa Fe, N. Mex.

[2] See Morgan, Robert M. and Bushnell, David S., Designing an Organic Curriculum; Bureau of Research, USOE; Nov. 1966.

To these ends each of the principal partners made a commitment: the cooperating school districts--representing old, new, small and large communities; national geographic distribution; cultural mixes, and varying levels of financial support--committed the full participation of at least one secondary school. This obligation carried with it a willingness to deal with the operational implications of new procedures and materials for the on-line management of the school.

The U. S. Office of Education, Bureau of Research, commitment was to the initial support of a program coordinator at each school site, and for the provision of modern management assistance for the operation of the total process. This, in effect, provided linking agents to operate both within the individual school district, and between all partnership elements.

The new linking relationships which were to be the framework of the ES '70 process as a whole provided a way for each of the partnership elements to meet its research or development needs. A research funding agency (such as, but not limited to, the Bureau of Research, USOE) could better assure that the products of necessarily fragmented research would be useable within the operational reality of an ongoing school situation. Too frequently, the products of development and testing in atypical, controlled, experimental environments could not be utilized in classrooms where "irrelevant", but very real, factors were not controlled. These funding agencies required, and had potentially, in ES '70, a way to anticipate the operational implications of present, or future, funded research. The individual research organization also had in the ES '70 18 school network, a testing-validating ground that represented the state-of-the-art in school operation, needs, and problems.

The individual school district had access through these new relationships to information for more relevant decision-making and to new processes which could be adapted to meet its needs. It had opportunities to exchange information vertically with state and federal agencies and horizontally with other educational institutions at both school and college levels. These interactions could provide mutual support among those with similar problems; could provide accessible models for local adaptation so that in all ES '70 schools improvement could be cumulative rather than duplicative, and could promote synthesis of new knowledge about the management of education as a development process.

The third partner in the ES '70 relationship--the state departments of education were recognized as potentially the agency that could gain the most from the success of the project. If ES '70 would eventually provide an effective model of a developmental, comprehensive change process that could be practically implemented, then the interactive linking relationship of government funding authorities, local districts, and higher education could be replicated more widely and economically on a statewide basis.

Overall, the ES '70 original design provided a way to correlate the all-too-often conflicting objectives and needs of research agencies and development agencies. While research utilizes primarily a controlled environment, development--or the effective implementation of an idea--requires that all possible factors influencing, or affected by, a new procedure be anticipated and dealt with. As one can recall in the old parable of the Blind Men and the Elephant, their research procedures were adequate as long as the blind men only had to describe the part they had contact with. From their partial research, however, they could neither project nor develop a living organism.

A school, too, is an organic system. It is more than the sum of its parts and therefore cannot be functionally assembled by merely putting parts together. It must develop in a manner which permits each part to grow, and concurrently function, in relation to all other parts. What any organic system, be it elephant or social institution, requires to do this is means for each part to interact with others in the exchange of information and resources.

In ES '70 this linkage, providing for the exchange of up-to-date relevant information, was part of the task assigned to E. F. Shelley and Company, Inc., a multi-discipline organization including specialists in educational management and information systems. As a separate agency viewing each activity in reference to its effect on the whole it could collect data, analyse, and relate school needs to research and research-funding agencies, appropriately disseminate research information to the schools, and develop new means to facilitate the exchange of information necessary for decision-making, among all concerned.

III. Early Activities, Problems, and Accomplishments

During the initial two years the principal leadership role for ES '70 was carried by the U. S. Office of Education, Bureau of Research, with much of the day-to-day operational responsibility borne by E. F. Shelley, the systems management firm. The ES '70 school network was administered by a governing board consisting of the 18 member superintendents, two chief state school officers, and two non-voting ex-officio representatives from the U. S. Office of Education. All funding during this period came from the federal government with the major share going to research and development contracts for (1) the design of curriculum elements built around objectives stated in terms of learning performance, and (2) for associated staff development and school management procedures.[1] Federal funds also have supported the cost of an ES '70 coordinator for each cooperating school district and the systems management assistance.

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[1] Categories of Activity Comprising Substance of Current Efforts

A. Staff Development
  1. Professional Pre-Service
  2. Professional In-Service
  3. Non-Educational Professional Utilization
  4. Sub-Professionals

B. Instructional Management and Career Guidance
  1. Educational Objectives
  2. Cluster Arrangements of Vocational Careers
  3. Curriculum Development
  4. Instructional Material
  5. Instructional and Learning Media
  6. Modular Scheduling
  7. Individualized Instruction
  8. Guidance Progress and Procedures
  9. Reduction of Failures

C. School Management
  1. Staff Utilization
  2. Information Handling
  3. Increased Efficiency in Communication
  4. Simulated Decision-Making in On-Line Situations
  5. Scheduling Progress, and Accounting for Pupils
  6. Budgeting Fiscal Accounting, Personnel Records
  7. Modification of Existing Plant
  8. New Structures

D. Evaluation
  1. Student Assessment
  2. School Accreditation
  3. Use of Data Processing in Evaluation
  4. Student Certification
  5. General Evaluation of Educational Progress

It became apparent during the first two years that certain administrative modifications might clarify the nature of the process and enable it to function more effectively. During the preliminary stages of development, as the concepts were being shaped interactively, the acronym ES '70 took on the character of an idiomatic adjective employed with different meanings to label anything associated with the project, thus:

an ES '70 - school district (member of the network)
- type of curriculum (organic)
- form of school organization (individualized)
- type of teacher (in an individualized classroom)

The result was that outside the project (and in some cases inside) there was a lack of clarity as to its true nature. Rather than seeing it as a process of developing a correlated comprehensive means to change a curriculum and school organization while at the same time filling current daily obligations to students under present organizational situations; and as a representative reality testing network for the research and development of the new instructional products; it was being viewed as a limited, product-oriented project. While still an important element of the process, these visible products, in the form of more relevant curriculum and individualized instructional materials packages, would have been a valid expenditure for major research funds whether the ES '70 school network existed or not.

In addition to the uncertainty as to its nature, the complexity of the program did not facilitate a clear delineation of policy-making nor administrative function. Its direction necessitated meetings of the executive committee of the governing board monthly, a demand upon the time of the members that was not compatible with their full-time responsibility as superintendents of schools and chief state school officers. Furthermore, the direct stewardship of the federal government, a necessity during the formative stages of the process model, was beginning to result in the ES '70 project being regarded primarily as a project of the Bureau of Research which had served to channel the federal dollars and interest.

At this stage in its development, therefore, the ES '70 partnership undertook two important modifications in its administrative structure: (1) formal incorporation of the school network and the employment of an executive secretary, and (2) administrative separation from the U. S. Office of Education. It was believed by all parties concerned that these changes in process would facilitate the attainment of their mutual goal--the creation of a realistic model for educational improvement that could be emulated on a nationwide basis. The benefits projected were:

1. A more balanced partnership of local, state, and federal authority which by strengthening the administrative role of the state and local agencies would also strengthen their commitments.

2. A broader and more general involvement with other divisions of the U. S. Office of Education and with various federal social agencies would be possible.

3. More involvement on the part of the private sector could be anticipated at a time when such involvement is an indispensible

requirement for educational progress.

4. Any suggestion of federal control of education would be avoided.

Overall, the initial activities of the ES '70 network during this early developmental period had been mostly of a "learning-how-to-learn" or more appropriately, "learning-how-to-interrelate" nature.[1] Through staff visitation and at meetings designed for inter-action, the coordinators, superintendents, state department of education and U. S. Office of Education personnel exchanged experimental information and theory, and revised, refined, built upon, and adapted for their own needs that which would move their schools closer to their common objective. One might summarize the broad accomplishments of the ES '70 process during this period as follows:

1. A viable federal, state, local partnership had been established which was, perhaps, the first of its kind for a major educational project.

2. A network, directly and indirectly, had fostered various specific actions and projects on the part of the member systems which held real promise for educational progress.

3. A systematic approach to the total problem of effective change had been prepared and outlined in detail, using modern analysis and planning techniques.

4. The U. S. Office of Education was provided the broad outline of a model in which it could anticipate needs for future R&D activities and therefore more appropriately allocate its research and development funds.

But what about progress in the individual ES '70 member school district?

While examples can be cited in almost any member school system of specific activities, innovative changes, etc., attributable to the ES '70 involvement, do these cases add up to an indication of positive movement toward the comprehensive improvement of learning opportunities?

One might question whether there could be any evidence at this early stage of development that the systematic process of developmental improvement is beginning to have an effect, especially since few, if any, of the "products" of the R&D contracts--the instructional modules, individualized mediated materials, etc., upon which much of the operation of the schools of the seventies will depend, are available now. Nevertheless, there are indications that something is happening to affect the total educational process in many of these schools. For example:

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[1] For more specific information about activities of the ES '70 project during its first two years contact:

E. F. Shelley and Co., Inc.
1730 Rhode Island Avenue, N. W.
Washington, D. C. 20036

--although ES '70 was conceived originally to be a secondary education project, several districts have extended the concept of an individualized curriculum to their Elementary and Junior High programs as well. This has not been merely the involvement of a few teachers in a limited project but has meant total involvement of school staffs in training experiences, in the development of new roles and procedures, and new relationships.

--the creation of new relationships between the schools and other educational institutions in their area has meant that in one case a local teachers' college has committed its entire program to the preparation of teachers who can manage an individualized learning environment; and in another case, a new community college will organize itself on an individualized basis with a curriculum that can be articulated with that of the local ES '70 secondary school.

--the effective integration of function and form in the design of one experimental school in the ES '70 project has positively influenced the County Board of Education to use it as a model for any future school construction in the entire county.

--the ES '70 involvement has served to attract outside funds and resources. Six of the districts received ESEA Title III Grants that relate to their ES '70 involvement; one district has received a large foundation grant to develop an individualized Fine Arts curriculum which would relate to the ES '70 development; and at least two districts have been contacted by knowledge-industry representatives and asked to serve as comprehensive validation sites for materials that industry is developing.

--in almost every district it is possible to see existing resources applied in different ways as ideas and materials exchanged between network schools are adapted to meet local requirements.

IV. The ES '70 Process: Some Observations

If the previously cited developments, as well as others not included, can be taken as indicators that something is happening which is moving some of the ES '70 schools toward the educational improvement they desire, then it may not be premature to try to identify what factors are contributing to that progress.

Without wishing to attribute any effect to a single cause, it appears that there is a relationship between the systematic management processes being employed and the identifiable results so far. With any technology it is always difficult to separate the technology itself from its effect, or what it makes possible. So it is with the application of systems technology.

These techniques, in the ES '70 development, have made it possible for

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at least four self-contained administrative systems (i.e., the school district, the network of schools, and the U. S. Office of Education) to function cooperatively when appropriate in order to accomplish common objectives. It is the output of this synergistic relationship, made possible by systematic planning and operating techniques, that may well be at the heart of the educational improvement process called ES '70. This "product" takes many forms: the new ideas, for instance, that have lain dormant because of lack of contact with an appropriate need; the time saved in educational improvement processes because the sharing of both positive and negative results permits cumulative rather than duplicative development; and the expanded involvement of individuals at all levels in meaningful, cooperative relationships.

If this sort of initial output is acceptable progress then some questions and observations about the techniques that facilitate it may be relevant to the broad concern for humane applications of modern technology.

How were the objectives of the system stated--(systems design); how were the problems and the resources to deal with them defined--(systems analysis); and what methods were established for getting from the present to the desired objective--(systems management)?

1. Systems objectives

The original goals of the ES '70 Project call for the development of a new comprehensive secondary school curriculum and organization

--providing an individualized education for each student
--highly relevant to the adult roles which he will play
--economically practical within available public resources
--based on behavioral and related sciences
--employing suitable systems of school organization
--utilizing appropriate educationally oriented technology
--locally planned and directed
--state supervised, nationally coordinated
--financed by federal, state and local funds
--designed for ultimate availability to all school systems.

It is essential to note that this was in the form of a statement of educational objectives, rather than learning objectives. That is, they were expressed in terms of what the educational institution or process must do to facilitate the maximum development of an individual rather than what the student must do. Learning, or the process of individual development, encompasses different order of objectives. The task of determining learning objectives and the question of who determines them should not be confused with the task of providing the environment to facilitate their attainment. In the ES '70 design, learning objectives serve as a relative constant about which to construct a manageable environment--one which can be responsive and flexible enough to contain the options necessary to adjust to individual needs, and aspirations, and objectives.

The operational objective for the management of the secondary school of the seventies was termed, appropriately, an organic curriculum since, as in all organic systems, all parts would have to relate interactively to the total objective of the system--the facilitation of individual learning. While "organic curriculum" may be a new term, the concept of an educational system flexibly responsive to the needs of the individual is certainly not new. The acceptance of it, however, as a realistic operational objective, rather than a hope, is part of a growing conviction that something can be done about the future because of the knowledge and tools we now have at hand. As Dr. Emanuel G. Mesthene, director of the Program on Technology and Society, has suggested, might not "our ideals, henceforth, be plans of action, instead of simply hopes, or projections of a past that will probably bear little resemblance to what may be possible in the future? It seems clear that so long as the past is our only model for the future, the future will be constrained by our past, and to that extent fall short of the full potential of our power and technology...."[1] As an operationally-stated objective the organic model for school operation is such a "plan of action" based upon, not what has been done in the past, but on what is needed to facilitate learning in the present and immediate future.

2. Analyzing the present: organic or inorganic

The organic educational environment as a model for the school of the '70s, is assuredly not the only valid model or paradigm for relevant learning. As with any other model for the future, it will be of little value, however, if the gap between it and the present seems unbridgeable. If it requires the creation of so much that is new, and the discarding of so much that is old, it may work as a heavily supported demonstration at scattered atypical points around the country, but will be unrealistic for most of American education.

When faced with an objective that seems realistically unattainable, as the organic school might, the first inclination usually is to make modifications in the goals themselves until they are described in terms that appear at least to be within reach. Commitment then, has to be made to this intermediate goal as if it were the original objective, since no one likes to make an all-out effort to get only half-way there. Subsequent efforts, therefore, while within the logistic resource capability of a system lack the sound conceptual underpinnings that the original objective provided and cannot usually stand up for long under formal or informal evaluation.

This is not the only way to build a "bridge", however. Rather than modifying the distant end, sometimes it is possible to re-assess the point where one begins. Would a different combination of resources, or a different perspective on the situation provide a firmer foundation on which a "bridge" to the future could be constructed?

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[1] Mesthene, Emanuel G.--from a speech "Technology and Human Values" presented at the American Management Asbociation, August, 1966.

One difficulty in this approach is that many times the manner in which we analyze and describe the present, limits our perception of its true nature. In a mathematical statement, 3 1/4 + 4 1/3, for instance, the mixed numbers, without changing their values, can be described in another way which provides a common foundation for solution--thus, 3 3/12 + 4 4/12.

Similarly, in education, the terms one uses to describe the pieces or elements of the whole are arbitrarily conceived for the convenience of communication, and it does not matter what method of dividing the whole is chosen as long as the total description is satisfactory. Education can be broken up into certain pieces for description, (such as administration, instruction, special services; or elementary, secondary, higher education) but that does not mean that it is necessarily put together from such pieces. This is important to note for two reasons: first, pieces created for the sake of explanation or description of roles, many times come to exist on their own as separate unquestioned entities;[1] and second, since many of these present elements would have to function in a radically different manner in the organically-conceived school, the task of changeover from the present seems an impossible one.

Experiences in the ES '70 schools seem to indicate that this frequent pitfall to educational change can be dealt with. Heretofore, the lack of a common perspective and terminology with which to view and describe both the present and future often resulted in the latter being described in student learning (output) terms and the former with reference to teaching or school procedures (input). When one attempts to describe what has been happening in the ES '70 schools without falling back on the accustomed, but arbitrary, educational descriptors, the completed description would seem to support those in education and behavioral psychology who have sought to analyze the school as a social process or system of human relationships.

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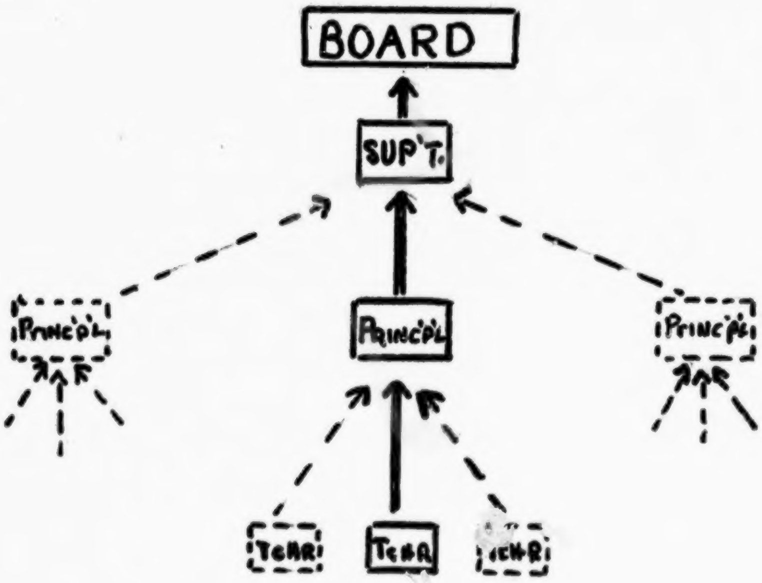
[1] For a detailed exploration of the effect of this on creative thinking see DeBono, Edward, New Think, Basic Books Inc., N. Y. 1968

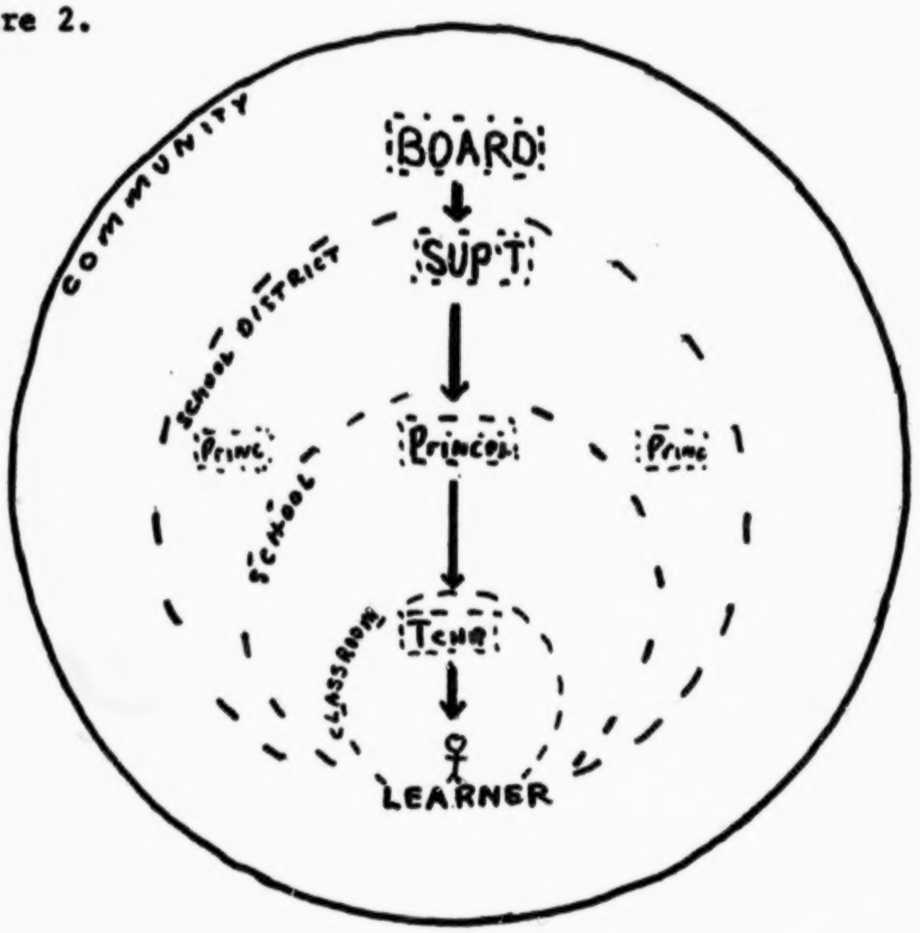
For example, the standard description of a school system makes divisions in terms of responsibility and responsiveness to higher authority.

Figure 1.


BOARD
SUP'T.
Princ'pl
Princ'pl
Princ'pl
Tchr
Tchr
Tchr

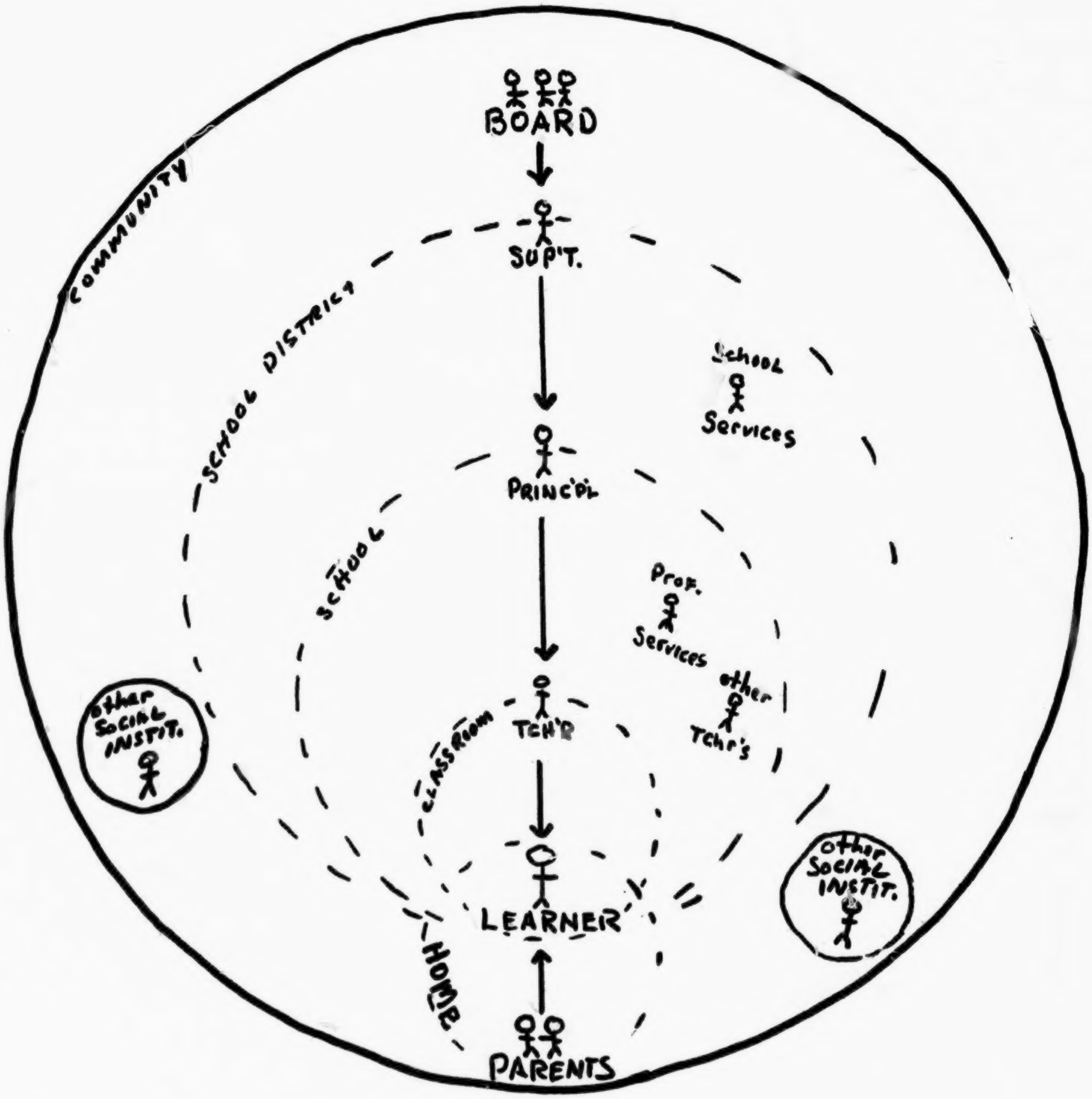
Suppose this organizational description were drawn in terms of environmental relationship to the learner rather than to the school board?

Figure 2.


COMMUNITY
BOARD
SUP'T
SCHOOL DISTRICT
Princ.
Princ'pl
Princ
SCHOOL
Tchr
CLASSROOM
LEARNER

Add to this the other people who make decisions that affect the development of an individual and a paradigm results on which can be plotted both the present educational management process and the hoped-for future operation of the educational environment. The direct and indirect effect of decisions on learners can be visualized while new forms of interaction and cooperative relationships can be projected.

Figure 3.


BOARD
COMMUNITY
SUP'T.
SCHOOL DISTRICT
School Services
PRINC'PL
SCHOOL
Prof. Services
other Social Instit.
TCH'R
other Tchr's
CLASSROOM
LEARNER
other Social Instit.
HOME
PARENTS

In this way, both the present and future systems can be plotted in the same organic, or people related terms. The change process to be applied, therefore, would not require a transition from an inorganic system to an organic one, but rather from a less efficient already organic system to a more efficient and responsive one.

Education today may be housed in a restrictive, non-responsive, non-organic framework, that is, individuals are forced to develop their own means for interaction, reinforcement, and influencing objectives because they are structurally prevented from affecting the whole, but this only means that the total process is forced to operate through many small, ineffective organic systems. The basic nature of the educational system remains organic.

3. Management of the process of development and renewal

The implications of this view of the starting and ending points of the process of educational change are necessarily important to the determination of the nature of the process to be applied. If the basic organic elements which will be worked with in the future are already available, but in most cases underutilized, how should this affect attempts to facilitate change or continuing renewal? One can make changes in an inorganic system merely by the external production of new elements and the piecemeal substitution of parts. In an organic system, however, changes take place in a coordinated, interrelated, developmental manner.

Three of the requirements for facilitating continuous change or development in an organic system are, according to Lippitt,[1] first that there must be greater "personal involvement of practicing personnel since significant changes in their values, attitude and skills are the basic requirement". To have this greater personal involvement, requires means to provide feedback to the practitioner about the effectiveness of his effort and those of his usually invisible colleagues. This serves both as a reward/reinforcement and a quality control aid for continuing development. The practitioner also requires the competitive challenge and good communication channels which stimulate sharing and cooperative improvement of practices.

Second, since what is being passed on is not a thing but a new pattern of behavior, the changes will most likely be "--adaptations rather than adoptions of the innovations of others".[2] The adaptor, therefore, requires much more orientation to basic principles or conceptions rather than to nitty-gritty operating procedures.

A third feature of development change in an organic system would be the need for "--adequate procedures for identification, documentary description and validation of new practices".[3] This requires networks, procedures, and manpower resources necessary to link basic and applied

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[1] Lippitt, Ronald; "The Use of Social Research to Improve Social Practice", Concepts for Social Change, NTL, NEA, Washington, D. C.; see also Lippitt chapter, "The Education Change Process: Guidelines and Pitfalls" in this publication.

[2] Ibid

[3] Ibid

research to operating practice, and ways to tap the great volume of creative practice which remains invisible and inaccessible to review and consideration.

Overall, one might conclude that change and renewal in an organic system is highly dependent upon the effectiveness of the linkage between all parts. These effective ties permit all to share in common understandings and goals, to contribute appropriately to new cooperative procedures; and make possible the extension of the positive effects of each individual's contribution to the greatest number.

Many elements of what Lippitt has described as necessary for a social system to continually improve are important features of the ES '70 management processes at both the network and individual school levels. Of major importance are the provision of active information exchanges between school districts, between schools and research contractors, and within schools themselves; and the investment in the ES '70 coordinator--an agent to link local initiative and participation with outside resources.

The interactive exchange of information takes on new meaning when it has a focus and purpose--when it is seen by all involved as an integral part of a larger goal, and when it produces noticeable effects. The formal and informal channels for communication established through the management services of E. F. Shelley and Co. for the U. S. Office of Education, the network governing board, and the local district school personnel, have made possible the type of two-way professional interchange, e.g., between university researcher and school validating site, between administrator and instructional personnel, that results in mutual modification of procedures.[1] The threat of one-way dominance of communication from higher authority to lesser, that too frequently obtains, is seldom seen when both communicants can relate toward common objectives. Even the sharing of negative results has beneficial consequences in a process based upon adaptive developmental change.

Supported with outside funds during these early stages, but operating internally, the local ES '70 coordinator has provided horizontal linkages within the school, outside it with the community, and with other schools; and vertical linkages with state and national educational groups. Serving on the staff of a superintendent who has made an operational commitment to the process of school improvement associated with ES '70, the coordinator has helped both to articulate goals and clarify needs so that intermediate objectives might be oriented towards the educational system's ultimate goals. With continuing access to relevant information from research and development, the coordinator's expanded sense of what-can-be-done has permitted him to assist local staff to adapt new ideas to their particular need and resource situations.

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[1] Services provided as systems management assistance by the E. F. Shelley and Co., Inc. have included:

- --establishment of PERT schedules;
- --development of a Management Information System;
- --monitoring of applicable research projects, through a monthly newsletter, ES '70 NEWS, periodic reports, and filmed presentations;
- --internal information dissemination through Coordinator's memos, research reports, and meeting reports.

The management of change in the ES '70 program is keyed to the re-connection of all those concerned with the promotion of individual learning. As one observer noted after visiting several ES '70 schools, the common element of their visible progress was not expensive equipment or materials, but rather the relationships between people and between roles. It is certainly no new concept to suggest that the success of any endeavor is highly dependent upon having "good" people, and it is equally true that there are never enough to go around. But, while some ES '70 schools may attract more "good" people than others, it might also be suggested that the larger share of the outstanding people who appear to be working in many of these schools would not have been allowed to be exceptional in systems which did not provide the breakdown of relative job isolation, the challenge of involvement in cooperative roles, and the satisfaction of seeing, as the result of one's efforts, measurable progress towards a stated objective.

The value of the comprehensive, organic approach to educational improvement which is being developed in the ES '70 project, can be illustrated by examining the effect of this approach on the development of new curricula and related materials. These materials, designed to learner performance objectives, are a basic element of the organically-functioning educational environment which is the ES '70 objective. Contracts for their development and production have received the largest share of federal research funding in the ES '70 project; and were assigned, competitively, to the most qualified authorities in each field.

At the same time, nevertheless, many of the ES '70 network schools have undertaken what might appear to be duplications of the Bureau of Research's larger effort. Teachers have been given training in the writing of performance objectives and in the creation of their own individualized learning materials. Moreover, principals have made environmental changes in the ways they apportion time, space, and personnel to accommodate these locally developed materials.

Rather than being a duplication, however, this is an important part of the "bridge-building" process. The ultimate ES '70 goal of an organic school would never be achieved if the schools in the network were to wait until the new materials, training procedures, and management techniques became available. If the changes in the school environment that are necessary in order to use effectively these new materials are to be accepted, understood, and applied broadly, then it requires that all participants be able to relate to the concepts and feel they are able to influence them. Just as riding a bicycle and the motorcycle require application of the same principles, so these local efforts at developing performance objectives and materials permit a staff and community to gain necessary understandings of new principles and concepts.

They can explore, understand and begin to deal with many of the ramifications of the shifting of concern from teaching to learning that these new materials represent. They have therefore something that meets today's identified needs, but which also provides information, both for themselves and others, as to what is needed in the design of subsequent materials and related practices.

In these schools instructional materials are beginning to resume their rightful place as variable elements to be continually shaped and improved to meet changing local needs, rather than serving as unchangeable constants that provide rigid scope and sequence for a classroom.

V. Implications of ES '70 and Questions for the Future

If subsequent developments in the ES '70 project continue to provide indications that the systematic management of educational improvement and institutional renewal is a practical hypothesis on which to predicate new strategies for both daily operation and continuing development, then there are implications to be considered in the continuing systems design and management of the ES '70 project and, indeed, for all of education.

A. Implications for educational demonstrations

Although the management of education as an organic, people-based system is basically a common sense approach, it can, like most systems approaches, create much resistance. Paradoxically, it forces us to rethink certain "common-sense" assumptions which we have accepted without question and upon which we have based most of our prior educational actions.

Additionally complicating is the "invisible" nature of the structure and foundations of this unfamiliar approach to education; that is, it is made up of different arrangements of acts and different relations between people. Relations such as those between student and teacher, teacher and parent, administrator and staff, community and school, etc., are--like the cohesive forces of gravity and magnetism--not discernible to the eye. They are, however, like these same natural forces, perceptible primarily through the observation of their effects on other things. But the demonstration of the desirability of these effects, of objectives attained, has not always been possible heretofore. Managing education for so long without any systematic way to define goals, operationally, in a manner which would indicate when they were achieved, education has grown accustomed to demonstrations of means as if they were ends in themselves. The "innovative school" employing a potpouri of new educational artifacts has been praised; and we have accepted comparative evaluations of different means as if they all led to the same objectives (e.g., teacher vs. machine, textbook vs. television, etc.).

In the preliminary ES '70 developments described in this paper, may be clues for those interested in increasing the "payoff"--that is, the replicability--of educational demonstrations. The history of educational innovation over the past few years indicates that demonstrations that focus on products, things, or specific innovations, seldom convince or equip a visitor to go back and adopt them in his home environment. What he expects to see in a demonstration, and what the promotional literature usually describes, is the new procedure or model operating at its ultimate stage of development. What the visitor actually does see, however, is usually some intermediate stage in the development toward that ultimate objective. Since this intermediate stage is not usually planned as part of the demonstration, it is rationalized as necessary only because some resource is lacking--not enough trained personnel, inadequate physical facilities, etc. The visitor is asked, in effect, to overlook this temporary deviation and to envision rather, the new procedures as they might work if the reality of school operation did not continue to impose itself. Fully aware of his own resource limitations back home, he leaves convinced that the innovation may be valuable but is unrealistic.

What the ES '70 form of demonstration suggests is that operationally-defined objectives, in the form of new models or procedures, have to be viewed as being at the end of a process of development, rather than what one begins with. Then intermediate objectives, or points in development--looking like neither the present nor the ultimate model--become valid. Moreover, the process of moving from objective to objective, in other words, continuous educational improvement, becomes more manageable and demonstrable. It may well be that this type of process demonstration based upon indicators of movement or progress toward the attainment of identified ends rather than the use of new means alone, will provide the replicable "payoff" that government and foundation funding agencies desire. A process, unlike many products, does not require for its adaptation similar resource situations or even similar objectives.

Unlike many others, the ES '70 demonstration network is concerned with a process--one of improving a total educational environment. Where some multi-school demonstrations try to reduce differences between schools to produce convincing supporting research, the potential strength of the ES '70 form of demonstration is that it does not require, unrealistically, for each of its parts to be similar. Because the application of systematic management procedures provided the capability for the multi-school network to be perceived and operated as a coherent system in itself, it is possible to capitalize on the individual differences in resources, objectives, and problems of the individual school district. Each one, during the development process, does not have to be involved in all aspects of the overall design but can have access to, and build upon, the experiences of others in the network.

Interestingly, from the point of view of replicibility, the progress so far in each ES '70 school, has not been the result of the massive infusion of outside funds. It might be duplicated by other educational institutions if they also had access to the information, interactive resources, conceptual support and planning assistance provided by the overall systems management effort. Moreover, by viewing educational improvement as a total institutional transformation rather than as a separate "project", the cost of changed procedures need not be considered an "add-on" to the regular operating budget, but, instead, as a more effective deployment of present resources allocated for dealing with the same needs.

B. Implications for accountability, evaluation, and research

Knowing where one is, in terms of where one wants to go, is an inseparable part of the process of getting there. In the systematic management evaluation cannot be a peripheral, after-the-fact research activity. It is a basic input to the decision-making necessary for a continuing process of successive modifications.

The value of operational objectives in both the instructional and administrative operation of a school is that they provide a basis for evaluating, or auditing progress. While the fundamental need for continuing and up-to-date information about what goes into and comes out of educational processes makes it necessary to develop educational auditing procedures, these performance objectives make it possible. By applying available information-gathering and processing technology, there is much data that is already available, but non-functioning, that can be activated and used to provide necessary information about students, parents, and community expectations. There is also an abundant store of relevant knowledge from research that is inaccessible for the daily decision-making requirements of a school. Additionally, to deal with the multiple input factors that affect human development information processing technology can be applied to the formulation of "new" knowledge in the form of multi-dimensional correlations of factors. Overall, the educational audit will permit a decision-maker to operate with far greater assurance and efficiency than he can at present.

For educational research in general, the potential value of a systematically-managed comprehensive environment to serve as a validating site became increasingly evident as the results of specific research were monitored and fed to the network schools. Few research organizations have the capability, or are funded, to deal with all aspects of a problem, or ramifications of a new approach. Yet, if they are conscientious they know that their effort will be of little value unless someone is dealing with these other factors and, hopefully, in a way that relates to their effort.

In the ES '70 structure which provides for the validation of individual research efforts in realistic, operational environments, they have a way to identify these other factors, for themselves and for research funding agencies and to interact with those involved in complementary research and development so that they may mutually affect one another.

C. Implications for the design of instructional materials to support developmental educational improvement

Heretofore, most instructional innovations have made only slight inroads into the schools. When they are used more widely, it is possible that they will have effects not contemplated when designed for present limited use. The application of systems management approaches to this problem can permit the anticipation of the indirect effects of large-scale use of new developments so that they can be accommodated.

In schools where the curriculum is a part of a process of continuing development, new questions will have to be raised relating to the design and production of instructional materials.

Will there be any justification for the fear that large-scale curriculum development efforts will result in a standardization of curriculum when schools and school personnel are equipped, conceptually and technically, to adapt outside materials, rather than adopt them?

Can the knowledge industry which is tooled-up to produce and distribute materials locked into certain sequences, formats, and media relate to the needs of the continuously-developing and renewing school to have material which can be adapted to meet changing logistic, social, or other needs? Can relevant knowledge be housed in formats which will permit resequencing of instructional modules to adjust to different entry levels of students; which will permit adaptation to various disseminating media depending upon local logistical problems; and which will permit selective use by either teacher or student?

D. Implications for professional staff

Although the focus of the Educational System of the Seventies is on an individual learner, its structure is, for the most part, derived from, made possible by, and dependant upon the individuals who comprise the professional staff. It is of interest therefore that the systematic management of an educational environment formed around stated learner-based objectives is particularly relevant to the concerns of the professional educator today.

At a time when the security gained from working within a constant, unchanging institutional structure, is fast disappearing from education, the need is for a process which has articulated, meaningful objectives from which an individual can plot his role and measure his contribution. In many of the ES '70 schools a new level of personal satisfaction was reported by both teachers and administrators because the objectivized instructional environment made it possible for them to have greater assurance that they were affecting children. Furthermore, many staff members reported feeling that their role had been broadened and the new relationships were permitting their effect to be amplified. At the same time, these new cooperative relationships and interactive linkages suggest that the instructional environment need not be entirely dependent upon the personality and guidance of a single individual. This is especially important in a day when innovative educational leadership is a very "marketable" commodity.

Continuing staff development in the systematically-conceived and operated school no longer has to be something that exists apart, in time, from the reality of school operations. With curriculum development, administrative re-organization, and staff development proceeding as concurrent, rather than serial, processes, training experiences can be provided within the context of the needs of the system. This not only can give relevance and meaning to the experience but also permits more immediate application, and therefore reinforcement--of the new knowledge.

VI. The Linking Agency and the Systematic Planning and Operation of Educational Processes

An artist, by looking at his canvas as a whole, is able to organize and compose the "negative" or "white" space around an object in a manner that most effectively enhances the object or feeling to be communicated. The educational administrator, using systems approaches to view his institutional "canvas" as a whole similarly can identify and deal with those indiscernible relations which exist in the "negative space" between people and objects, and which frequently are the determinants of whether it will be possible or impossible to attain overall objectives. It is increasingly obvious in the ES '70 demonstration that to deal realistically with the schools as total environments, organizations, or systems that affect a child requires the means to perceive the environment as a whole, and to anticipate, plan, and allocate resources in light of overall objectives. This much was assumed in the basic conception of the project. The systematic operation of an educational process, however, is a problem of a different dimension and cannot be assumed to follow automatically from an overall analysis and plan. The operation of an organization as a total system requires the interactive ties between all parts that will permit this functioning--links that are not part of current administrative frameworks. Once operating as part of a systematic process, an organization can build upon, reinforce, or modify this linkage but this cannot realistically be done until it is operating.

One of the most significant aspects of the ES '70 demonstration is the utilization of separate process management assistance as the most expedient way to build and maintain the links which give a total system its structure and initial life.

Moreover, this management assistance, by applying Program Evaluation and Review Techniques (PERT) and initiating a Management Information System (MIS) makes it possible to initially identify, and continuingly monitor, the research and organizational needs of the total project as well as of the individual school districts. Therefore when changing conditions necessitate a re-evaluation of priorities, the overall view of current status with reference to objectives, which the employment of these management techniques makes available, makes it possible to modify the program without effecting its direction and momentum.

The type of management assistance provided in this project, based as it is upon a blend of multi-disciplinary expertise and humanistic concern, holds great promise for dealing with an underlying problem in most areas of social concern today--that is, how to deal with far reaching, complex problems without losing sight of the individuals concerned. One only has to look at daily news accounts of budget cuts, taxpayer revolts, student protests, and teacher strikes to recognize that society does not yet see clearly how it can reconcile the increasing demands by *individuals* for influence and *participation* in their environment with the governmental need to consolidate resources and efforts to deal most efficiently with critical problems. The danger is ever present that society may view the fulfillment of both of these needs as mutually exclusive. The continuing demonstration of the contrary--that they can be dealt with concurrently--should be a fundamental reason for the continuing utilization of systematic planning and management techniques. Only in this way can the hope become a reality. The consolidation of human effort and material resources need not be planned, nor operated mechanistically. The application of technology and new organizational methods need not produce conformity. Man can, with a little understanding, commitment, and effort, organize an environment which provides options, opportunities, and promotes diversity.

PART THREE - IN ACTION

Chapter V - The ES '70 New Orleans Conference
Report
Edited by Lucille Schaible

Chapter VI - The Quincy Story
by Lawrence P. Creedon and Miriam Ritvo

Chapter V

THE ES '70 NEW ORLEANS CONFERENCE

Lucille Schaible, Conference Editor
Northwest Regional
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On March 6, 7, and 8, 1968 ES '70 brought to New Orleans an impressive gathering of educational specialists* to participate in a dialogue around a massive revision of secondary education. It was a stimulating two and a half days focused on what the future might hold for coming generations of American high school students. The group included curriculum planners, professors in subject matter areas, secondary school educators, secondary school students, behavioral scientists, representatives from professional associations, advisors to and representatives of the U.S. Office of Education. Discussions dealt with major changes in curricula, teaching methodologies, management of the learning process, and student involvement. The conference was not intended to provide the answers to all the problems of educational improvement in a rapidly changing society. It did represent a promising effort in collaborative problem clarification.

Several assumptions underlay conference planning:

1. It was assumed that many different groups of scholars and educators have a valid "vested interest" in the secondary curriculum and that their priorities as to educational experience will differ greatly.

2. It was assumed that the conference should provide opportunity for open expression of differences and an opportunity to explore consensus as to objectives for the '70's.

3. It was assumed that participants at all levels of the educational enterprise - academic scholars, professional educators, local school administrators, teachers, students, and federal and state agencies - should express consultative thinking to

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*Appendix A - Participant Roster

ES '70 and should have opportunity and responsibility for listening to one another.

4. It was assumed that a single conference could be only a start up of problem-solving work. It could not be expected to develop systematic, consensual statements about educational objectives for ES '70.

With these assumptions the conference was designed with the following objectives:

1. To maximize opportunities to explore and articulate priorities for curriculum development.
2. To maximize the opportunity for the members of different interest groups (including high school students) to confront and listen to each other.
3. To provide a conceptual framework for integrative thinking.
4. To determine the readiness of various interest groups to collaborate more actively and intensively with ES '70 in formulating objectives, directions for developmental work, and providing linkage for ES '70 to key personnel and educational resources.
5. To provide an opportunity for the real consumers of educational experience--the students--to help define priorities.

The conference planners de-emphasized speeches in favor of active participation in problem-focused discussions and explorations of differences as to educational philosophy, objectives, curriculum, and methods.

It was anticipated that the emphasis on openness of communication and freedom for initiative would create disease for some who had not participated extensively in work conferences, and who would feel that a more structured leadership, emphasizing technical expertise and centralized decision-making was appropriate and productive. At the same time it was felt that re-making the curriculum will demand commitment that can best come through being involved.

The First Day of the Conference

A panel of five persons brought delegates up to date about ES '70 and gave the conference charge. The panel included:

Dave S. Bushnell, Director, Division of Comprehensive and Vocational Education, Bureau of Research, U.S. Office of Education.

Robert H. Morgan, Bureau of Research, U.S. Office of Education.

John Mays, Office of Science & Technology, Executive Office Building, The White House.

Arthur W. Foshay, Associate Dean, Research & Field Services, Teachers College, Columbia University.

Robert E. Pruitt, then Superintendent, Quincy Public Schools (now U.S. Office staff).

The substance of the opening statement follows.

"The Case for the Neglected Majority"

For the first time in the educational annals of this country there is a clear consensus on the need for overhauling the secondary school system. Curriculum specialists, behavioral scientists, and administrative personnel concur that today's secondary school is inadequate. Current reports on civil disorders indicate that our public educational system has failed to provide the type of experience which can overcome discrimination and deprivation of the ghetto resident. Sociologists and educators have observed that our public schools are non-rewarding, the students are "turned off" by a series of unsuccessful learning experiences, that students feel the learning environment as hostile and custodial rather than involving and challenging, and that many teachers fail to appreciate the individual differences in their classrooms. The Passow Report on the Washington, D.C. School System noted that if one applies the usual criteria of scholastic achievement -- holding power of the school, post secondary employment status, and college entrance qualifying scores -- the District schools do not measure up very well. Similar failures can be found in most of the larger urban systems. It is against this background of contemporary life that this conference was called. We have not done enough for the millions of students who may be average or poor academically or average or poor financially and for one reason or the other will not go to college. While maintaining our interest in the able college-bound students, we need to reawaken our concern and strengthen our capacity to serve a wide spectrum of student ability and interest. Secondary education is going to have to bring vocational training into the comprehensive high school, involving business and industry in effective curriculum development. The time is past due for the development of a comprehensive curriculum.

David Bushnell noted that conference participants represented two major relevant developments. First, are the course content improvement projects carried out by top academic and professional talent such as Jerrold Zacharias. Second is a growing interest of some scholars in the special educational requirements of the "culturally disadvantaged." Included is the work of Arnold Grobman and the Biological Sciences Curriculum Study Committee, Max Beberman's work on school mathematics, and Ed Begle's work with the School Mathematics Study Group. Still a third development is the concern for better materials and methods of those who are studying the problems of the disadvantaged. Some $25 million has been spent by the U.S. Office of Education Bureau of Research on curriculum improvement. Unfortunately, excluding a few such efforts as these, this investment has yielded limited results. If today's massive problems are to be dealt with effectively, new coordinated efforts must be applied to a laterally and vertically articulated program at the various grade levels with built-in review and reinforcement techniques at each step. It is not enough to graduate high school students who meet only the minimum requirements for entrance into college or for entry into work. The objective should be to tap each child's unique strengths by linking his vocational and avocational interests with the broad array of information and behaviors to be learned.

It is encouraging that a number of recently pioneered innovations for responding to individual student learning needs within and outside the classroom setting have been found useful. Special motivational techniques which link learning achievements with desired rewards have been effective. Computer games have been successfully used in teaching teenagers to think through appropriate career choices. Attempts to individualize instruction -- as in Glazer's work at Oakleaf School -- have demonstrated that the student can involve himself at his own rate in the learning process. New textbooks are appearing which gear information to the background and reading level of the student. "Hiptionaries" introducing hip words can be used to help communicate other linquistic concepts. Tutorial programs with sixth graders helping fourth graders learn to read have produced dramatic results for the younger children - and even more dramatically - for the older helpers. The expanded use of subprofessionals offers hope in giving more intensive attention to children who need it.

The potentialities for implementing a new system thus already exist. A first need is to clarify goals or objectives for the '70's. A second need is to characterize the system which might make their achievement possible. The "integrated curriculum" envisioned for ES '70 will have to be interesting, challenging, and motivating to each student. After experimentation and revision, the curriculum would need to be capable of replication in other school districts. And it should not be much more expensive than today's per pupil cost.

The overall design of this curriculum as conceptualized by David Bushnell and Robert M. Morgan* should achieve these objectives:

1. Integrate academic and vocational learning by appropriately employing vocational preparation as one of the principal vehicles for the inculcation of basic learning skills. In this way learning could be made more palatable to many students who have difficulty seeing the value of a general education.
2. Expose the student to an understanding of the "real world" through a series of experiences which capitalize on the desire of youth to investogate for himself.
3. Train the student in a core of generalizable skills related to a cluster of occupations rather than to one specialized occupation.
4. Orient students to the attitudes and habits which go with successful job performance and successful living.
5. Provide a background for the prospective worker by helping him to understand how he fits within the economic and civic institutions of our country.
6. Make students aware that learning is life-oriented and need not, indeed must not, stop with their exit from formal education.
7. Help students cope with a changing world of work through developing career strategies which can lead to an adequate level of income and responsibility.

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* For elaboration see Bushnell and Morgan, "Designing an Organic Curriculum." U.S. Office of Education, Division of Comprehensive and Vocational Education Research. Mimeographed. 1966.

8. Create within the student a sense of self-reliance and awareness which leads him to seek out appropriate careers with realistic aspiration levels.

There are a number of unanswered questions that must be examined before such a curriculum can become a reality. For example:

1. What are the relevant educational goals, the reasoning skills, attitudes, and personality characteristics which will permit the student to function in the adult world?
2. What can subject matter groups represented at this conference contribute to the achievement of these educational objectives?
3. How can new and recent concepts developed through research be used in achieving these objectives?
4. What are the problems involved in integrating subject matter from the various fields so that each student has available to him alternative pathways to the achievement of the educational goals outlined by the conference?
5. How can the skills, knowledge, and attitudes appropriate to the ES '70 curriculum be operationally defined and measured?
6. How can the individuals represented at this conference, and other groups, contribute to further research, exploration, and implementation in educational goal-setting and the development of new instructional methods?
7. What steps should be taken next?

An adequate response to these questions calls for a massive effort over a five-year time period and may require an investment by the U.S. Office of $30 million. Such funds, however, will constitute only a fraction of the total dollar requirements. The ES '70 schools themselves will be looking for funds from other sources than the Federal Government, such as private industry, foundations, and State governments. Incidentally, the U.S. Office is already funding a number of projects involving the 17 network schools. The Department of Labor, the Department of Defense, the Office of Economic Opportunity, and the National Science Foundation have joined with the Office in this endeavor.

Equally important are manpower resources. With this in mind the conference was called bringing together many of the country's top curriculum specialists, educators, consultants. It was expected that the conference would help initiate a genuine collaborative effort.

Conference Procedures

After this over-view, Ronald Lippitt, Chairman of the Conference Coordinating Committee,* then briefed the delegates on procedures and their rationale as follows:

> "We are being asked to take a national leadership role in exploring one type of approach to coping with the serious problem of educating our young more efficiently and creatively. Our work here together will be one test of the potential for real change in our system."
>
> "In this conference we are asked to cope with several opportunities:
>
> 1. To react to and to help clarify the conception of the ES '70 or integrated curriculum which is in process of development.
> 2. To explore with colleagues from all subjects of the curriculum, the problems and feasibility of identifying functional goals and statements of derived student learning outcomes - and points of major disagreement that will have to be worked through.
> 3. To explore within subject matter groups judgments about priorities among derived outcomes, and to clarify what we believe are our particular contributions to the creation of an integrated curriculum.
> 4. To list and use the resources of several groups participating in the conference.
> 5. To produce a report identifying major work that needs to be done."

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* Committee developed through the NTL Institute for Applied Behavioral Science Associated with the NEA, also included Robert Fox, Dorothy Mial, Don Orton, and Lucille Schaible.
The Steering Committee included David Bushnell, Charles Blinderman, Libby Cater, John Mays, Robert Morgan, Roberta Rubel, and Charles Whitmer.

Dr. Lippitt proposed the following procedure:

We will work in various groupings:

In cross subject matter groups
In homogeneous subject matter groups
As individuals

We represent these special resource persons:

Students

ES '70 school representatives

Educational scientists and technologists

Representatives of professional associations

Staff members of the U.S. Office of Education

Convener and recorder team for each work group

We will have access to evaluation and feedback by everyone as guides for the Steering Committee.

The schedule proposed for the afternoon calls for:

a. Thirty minutes in cross disciplinary groups to get acquainted and to formulate questions about ES '70 for sharing in general session

b. General session on questions and issues raised

c. Work in same sub-groups to specify ideas as to priority objectives and outcomes for ES '70 program

It was assumed that the questions from the small groups would stimulate discussion, provide needed clarification, and help develop agenda for the rest of the conference. The following questions were shared before breaking into small groups to stimulate thinking:

1. What are the relevant learning experiences which will help students develop the reasoning skills, attitudes, personality characteristics which will lead them to self-fulfilling, useful roles as adults?

2. What are the problems involved in sufficiently integrating subject matter from the various traditional fields, e.g., social studies, humanities, science, math, and vocational education, so that each student does in fact have available to him alternative pathways to the attainment of a variety of educational goals?

3. What are the needed changes in content and instructional method which would help to achieve the new educational goals?

4. How can the new instructional technology be appropriately exploited in this role?

5. How can the attainment of the skills, knowledge and motivation be extended by teachers as the student progresses through school?

   What are the educational objectives that are relevant to the development of personal and social characteristics appropriate to the individual?

   How can these be operationally defined and perhaps measured?

6. How will the role of the teacher-administrator and supporting person change, and will the emerging role be acceptable to the community?

7. Are the present techniques for measuring student performance adequate?

   Are these performances, as measured, predicters of adult success?

When the groups reconvened in general session to share their questions, it became evident that freedom to get questions out into the open had produced a flood of issues and concerns testing the motives and ideology of the ES '70 program and revealing anxieties and concerns among the participants. As each group shared its questions an ES '70 staff member recorded them on sheets of newsprint. These were then taped to the walls for continuing reference and consideration. Such questions as these were raised:

1. Who will have the authority to make decisions? The U.S. Office of Education? Is the Federal Government taking over education? Will ES '70 take all funds away from other government funded curriculum development projects? How can we be assured that ES '70 will use existing innovations?

2. What is ES '70? Do we approve of it? What is vocational? Can we get agreement among the disciplines on an interdisciplinary approach? Do we really want a uniform system? Why assume that integrating subject matter is desirable? How can we assure quality in the new program?

3. What relation to higher education will an integrated program have at the secondary level? Is subject matter out? Are some subject matters to be outside the curriculum? How could we keep integration from becoming too rigid? How flexible is the ES '70 concept?

4. Why change secondary education? What convictions underly this effort? What is the underlying theory of knowledge for ES '70? Can we talk about styles of curriculum development or must it be ES '70?

5. Is there a commitment to behavioral objectives? Who will write them? Do behavioral objectives over simplify or do they organize the program?

6. Is this a cost-prohibitive system?

7. Why are we starting at the secondary level rather than the elementary?

These questions illustrate the general tone and mood of the delegates as they moved back into the general session, and as they surfaced suspicions, resistances, and disagreements.

The ES '70 staff panel attempted to deal with the questions candidly and openly. The major difficulty seemed to be in conveying the concept that instead of the Federal Government dictating answers to the questions, the opportunity was being given the delegates to use them as guidelines for further inquiry. Actually, delegates were being invited to use their talents and expertise to influence the eventual answers to the questions.

After some discussion participants were asked again to move into cross-disciplinary groups to complete the following task.

> "Describe several illustrations of concrete learning experiences and the desired student behavioral outcomes." These were to be recorded on sheets of newsprint and taped to the walls so that the thinking of the different groups could be shared with all the delegates. The purpose of this task, as defined by the coordinating committee was, "to focus on concrete cases and illustrations rather than more abstract discussion and to move quickly to the more concrete tasks."

Dr. Ronald Lippitt, Chairman of the Coordinating Committee, has this to say about what followed:

> "The dynamics underlying this conference were revealed quickly by the insistence that the conference remain in general session after the initial response period from the panel. The conference design recommended that the small work groups, by subject matter interest areas, convene to begin working on their ideas about priority objectives. The conference rejected this plan. Some of the influential leaders of interest groups wanted more opportunity to confront and test the Government 'power group' who, it was evidently felt, might have plans for centralized curriculum development which had not yet been clearly revealed. It seemed essential to them to get all this out in the open in order to know whether it was appropriate to put energy into creative thinking which might be 'used' for undesirable ends. The original plan to return to sub-groups was revised and the general session continued." Dr. Lippitt adds, "The openness of the conference procedures made it possible for real issues to emerge quickly rather than to stay smouldering and, in all likelihood, creating resistance as well as uncommitted participants."
>
> "The next day started and continued to flow productively, probably in large part because of the early support for testing issues of power, intentions, collaboration policies, etc."

Group recorders who first reported concern that the sessions would be unproductive later agreed that initial freedom to air fears and pose real concerns cleared the air for productive work. (See Robert Geller's memorandum, Appendix B, for one teacher's impressionistic view of the evolution of the conference.)

On the second day the conference worked in small groups organized along lines suggested by delegates, some cross-disciplinary and some homogeneous. Editor-recorders were assigned to (or volunteered in) each group. Their reports were rich and informative as submitted. To preserve their ideas as well as the general mood, the conference editor has limited revisions to a minimum. Thus the group reports do not always follow the same format.

Some of the recorders felt they were not adequately prepared, and some feared the task would interfere with their own participation as members. Accepting the importance of an accurate report, however, they responded with enthusiasm and persistence. It is with deep appreciation to these persons who accepted the editor-recorder role that we are able to present this section of the Conference Report. They are:

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The groups are identified as follows:

Group 1 - Social Studies

Group 2 - Integration of Courses at a Secondary Level

Group 3 - Integration of Courses at a Secondary Level

Group 4 - Philosophy of Deriving Behavioral Objectives

Group 5 - Vocational Education

Group 6 - Humanities

Group 7 - Communication Skills

Group 8 - Substantive and Political Considerations
with ES ' 70

Group 9 - A New Educational System
The membership of this group was composed of the high school students attending the conference.

Because people sometimes moved from group to group, it became impossible to accurately identify the membership of each group.

GROUP REPORTS

Social Studies: (Group 1)

Issues discussed by Group included:

1. Kinds of Goals
2. Generality of Goals
3. Unacceptable Goals
4. Kinds of Teachers Needed to Meet ES '70 Goals
5. Teaching Strategy For Reaching Acceptable Goals
6. Strategy of Change and Overcoming Resistance

1. Kinds of Goals

What reality is there in the specification of academic goals if many students are so isolated from the adult, middle-class world of the "WASPISH" majority that the conventional school operation (perhaps specially in the social studies) has no meaning for them?

It seems necessary to formulate both immediate and longer range goals.

a. goals which touch the student where he lives. To do this we have to learn what we don't know: What language does he speak? What language does he feel is worth speaking?

b. less proximate goals stemming from the students inevitable implication in society as worker, citizen, parent, etc.

Teaching in the Social Studies must start with the experience of the student and with the problems and issues that are meaningful to him. Thus, there are short-range goals having to do with the here and now world of the student but there must also be terminal goals. The learning and teaching activities that implement the students' education should lead to larger, more complex and socially relevant goals.

Somehow the short and the long-range goals need to be linked, perhaps with intermediate steps. In any case achievement of the more immediate should not jeopardize in a kind of copy and coy immediacy the possibility of meeting the larger and more distant goals. This type of approach suggests a constant interplay between present and future, between the private and the public, the personal and the social, and between the case and its generalization, between theoretical and empirical.

2. Generality of Goals

Need we discriminate between goals for the college bound and those headed for other destinations?

This group was inclined to think the answer is no--at least in their statement at an abstract level. Of course there would be individual differences and we should attend to these. There would also be different levels of achievement.

But this group sees the goals as generous ones cutting across the conventional curricular categories of students.

3. Unacceptable Goals

This group thinks it is not a goal to produce social scientists in embryo, or miniature models of economists, sociologists, psychologists, etc.

The group seems to be of the opinion that social studies have been unnecessarily and perhaps detrimentally discipline oriented, under the influence of the universities, the desire of administrators of running a tight ship, of professional organizations, and wary parents.

4. Kinds of Teachers Needed to Meet ES '70 Goals

We need teachers who are competent in their fields but liberated from the parochial confines of the disciplines. We need teachers who can demonstrate the relevancy of their materials and analytical tools to other fields, other problems, and other teachers.

a) Social studies goals can be achieved through agents outside the social studies--e.g., a member reports on an auto shop teacher who got to the problem of balance of payments by commencing with an interest in hot rods, proceeding to Italian car production and the success of VW's in the American market.

b) Vocational teachers and guidance counselors should help shape curriculum development in such a way that the student's experience is set in the context of the larger society and deals with problems that command intellectual respect.

c) The other way around, social studies teachers can better promote their goals with a universality of interest and ability. So by some devious route L. Senesh gets to Adam Smith by way of Carbusier, Miss van de Robe, and Frank Lloyd Wright.

5. Teaching Strategy for Reaching Acceptable Goals

How do we achieve our learning goals through an interdisciplinary program?

a) The group emphasis shifted here to multi rather than interdisciplinary operations. To put it differently the group is concerned about and would not advocate burying or even disguising the existence of fields that have an internal structure and represent the systematic accumulation of knowledge. We would advocate exploiting them as they are germane in the solution of problems.

The group sees the successful attainment of social studies goals as starting with problems that are personally and socially relevant, and adding needed tools and evidence from the several social sciences.

b) One member raised the question: "Are we not repeating the unsuccessful experience of the progressive schools of the '30's? What guarantee do we have that in our disenchantment with quite arbitrary discipline blocks, we are not reverting to the limited payoff of the experience-based, problem-focused, progressive education that has sometimes given such dismal results?"

One answer proffered was that sophistication in the social studies requires a K through 12 sequence, a carefully calculated, cumulative experience that does not sacrifice disciplinary concepts and techniques of analysis to cute, child-centered, pedological plays.

Another answer was suggested, that at least three of the social sciences; sociology, anthropology, and political science have recently come of age and are able to provide both content and method that were not available to social studies teachers 20 years ago.

But the group regards this question as a serious one and suggests that we should be on guard lest a preoccupation with ways of tying to the child's experience should leave the child with only childish experience, denying him the experience of the discipline.

c) In general we see a multi-disciplinary approach as meaning the recurrent application of analytical tools to diverse situations across which we generalize the use of given concepts and techniques. The aim is to help students use the concepts, understandings, and analytical tools of the social studies to confront and solve a wide range of personal and social (citizenship) problems. Moreover, the aim is to motivate the student to approach personal and social problem solving in this manner.

d) It was pointed out that a multi-disciplinary approach might take us outside the social sciences and into the humanities, particularly in the realm of values. The view seemed to emerge that social studies can and ought to result in commitments of some sort. The danger is that we do not make our intentions explicit; or that we fail to identify outcomes (intended and unintended) that affect students' values. We would hope that in the realm of values, students would become more adept at:

    1. discriminating between ascertainable fact and statements of preference,

    2. sensitive to wishful thinking when personal values distort predictions, and,

    3. able to discriminate between adequate and inadequate techniques of analysis - and preferring the former as a scientific value.

6. Strategy of Change and Overcoming Resistance:

We spent some time discussing resistance to those curricular changes which might be thought to improve chances of achieving our goals; i.e., resistance from parents, administrators; conventional patterns of teacher training, etc.

Discussion was inconclusive, but two suggestions were made:

a) We can sometimes adapt to external pressures by accepting demands for specified training, but by doing it expeditiously and not allowing such requirements to swallow the program.

b) It was pointed out by a member that strategies for meeting resistance are being worked on by Matt Miles in his work on Curricular Innovation. Miles states "A series of requirements have to be met if an innovation is to stick;" Design of the innovation; engineering; arousing local interest and awareness; and finally staff training.

Specific Objectives

In the course of this group's discussion a number of objectives in the social studies came out though not all of them were behaviorally specified. Among them were:

1. ability to formulate answerable questions.
2. to discriminate between an answerable question and one that can't be answered.
3. Knowledge of what resources of data and evidence are available that may lead to an answer.
4. ability to practice the logic of inquiry.
5. nurturence of the imagination -- we were borrowing from another group here the capacity to see, to join different classes of phenomena under the same general idea (the rusting nail and the burning match) the ability to extend the power of a proposition by identifying additional populations to which it probably applies.
6. ability to develop an argument, to create a theory - an explanation that becomes amenable to testing.
7. ability to carry a non-repetitive conversation on a specified problem beyond 90 seconds.

Integration of Courses at a Secondary Level (Group 2)

The group identified the following goals:

Entry Level Into Secondary Schools

Students must be able to read.

Program Goals:

Students will succeed.

Students will participate in the learning process.

Student Goals:

Physical:

The student will be in good health.

The student will participate in enough physical activity to maintain health.

Intellectual:

The student will show a desire to learn.

The student will give evidence of open-mindedness.

The student will show an interest in art and music.

The student will be able to perform in one of these areas to a limited degree.

The student will be honest and show good sportsmanship.

The student will use basic (generalized) ideas in solving problems and answering questions.

Social:

The student will have verbal skills on a variety of topics.

The student will have writing skills on a variety of topics.

The student will support community activities and participate in the democratic process.

The student will join groups working on community or social problems.

The student will attend community conferences.

The student will encourage cultural activities in the community.

The student can get and hold a job to support himself and family.

The group identified causes for failure of the present system of education to meet these goals:

1. Rigid time schedules - all students must work on the same topic for the same length of time.

2. Lack of individualization of instruction; failure to use small group activity when desirable.

3. Content that is college-preparation oriented, rigidly fixed, not related to students' interests and needs.

The group then identified the following ideas and issues that could be focused upon more extensively in later discussions.

1. We are all involved in vocational education. Vocational education extends far beyond the shop experience.

2. We must narrow the perspective and define how each subject area enters the experience. We cannot forget humanities and culture.

3. We must center activity on the "life role" of the individual realizing that we cannot cast everyone into the same die.

4. We must think in terms of new instruments for measurement of achievement.

5. We should discuss means and not worry about objectives at this time.

6. We must break the system which holds the discipline as an end in itself. For example, the classroom often revolves around a textbook dealing with some specific subject matter while all too frequently children are more interested in the clock.

7. We must recognize that that which is meaningful for one might not be so for another.
8. The school alone cannot meet the problems which society creates. We lack the thirst for learning that one might find in Japan, for instance. We must investigate means to induce this thirst among American students.
9. Integration of curricula offers the opportunity for expanding the classroom activity, allowing questions to be asked that have not been asked before.
10. Leisure is going to play a dominant role in people's lives and we must provide for this.
11. An awareness of values structure is mandatory and relevant teacher training is necessary.
12. Materials must provide for role identification. What a student is secretly reading must eventually appear on the blackboard. Further, we must recognize the role with which a student might identify and provide for continued support of that role.
13. Students must experience success by their own values.
14. Vicarious experiences are frequently not meaningful and objectives must be formulated to induce involvement both of students and of teachers.
15. Education is the integration of our capacities -- perceptory, intellectual, and emotional. Integration cannot be just curricular; teachers must be educated to integration.
16. Influences outside the school have a significant impact upon the students and the school should reach into the community.
17. Patterns in vocational education offer a clue to goal setting and the use of a vehicle for the attainment of those goals.
18. Teachers must become involved in each part of the program or they will not impart the enthusiasm requisite for its success.

After a luncheon break, this same group returned to focus its discussion upon those topics it considered to have the highest priority at the time. The following report summarizes that discussion.

Background

This group has come together because of a sense of the relative failure of our educational system to meet the socialization and educational needs of American youth. We know we are failing without having to spell out behavioral objectives. Our primary objective should be to propose means rather than to specify ends. The following points seem to be crucial in analyzing the present and proposing experiments to help improve it.

1. No complete solution of our problem can be found within the schools, or even within the educational system. A malaise is afflicting our society which is critical and dangerous. Its effects on our children are critical and deep. The school has yet to establish an acceptable milieu for the developing adolescent, but even if it should succeed in doing so, society is so torn with disagreement and discontent that it cannot provide a good area for the application of the ideas the adolescent has learned.

2. It is essential to maintain flexibility both in the experimental program and in the curricula being developed. It is a paramount task of education to inculcate universals by techniques adapted to the individual.

3. Integrated courses are vital in order to render topics vivid for as many students as possible and in order to generate interest in ideas that do not make an initial appeal. It is very often easier, and more natural to involve the student who tastes success and is thereby won to the educative process. Moreover, observations of the whole, followed by analysis into its constituent parts is the natural order of experience.

4. Education is essential for the constructive use of our leisure time (defined as the time not spent on earning a living). The problem is immense and increasingly so as much of man's dignity and self respect is associated with his leisure activities. He must understand the rationale of social service if he is to contribute effectively. Part of the contribution must be to recreate himself and help to educate his children.

5. Among the integrative procedures should be the use of a modern language to communicate with the student.

The integrating principle begins with the necessity of creating an order and continuity of concepts and skills drawn from the various disciplines that can be made meaningful to the learner in terms of the multiple roles he most immediately wants to succeed in playing.

The "role integrating" principle proceeds by adding concepts and skills that are:

1. required to claim the rewards (economic, social, leadership, etc.) of the society as it is and,
2. required by the individual to influence the society according to values he holds and shares with others.

Integrated curricula must also proceed by adding concepts, skills, and experiences that the learner begins to discover as enjoyable in themselves. By doing so the educational process gives to the individual the power to reward himself.

Thus, the process of integrating the curriculum demands many different beginning points, many alternative paths, but hopefully and cumulatively, some common outcomes. Probably one must take the trip to define or describe the outcomes or the meaningful contents of high school years with precision.

The finding of meaningful content will itself shape the materials, the kinds of equipment, media, and facilities that will be useful. Definition of these will emerge experimentally from the many curriculum development efforts. The undertaking is so complex that it requires many models, not a few, and heaven forbid, not one!

Impressions:

Integrated curricula can be effective if:

1. Careful definition of its strengths and weaknesses is made.
2. Training of personnel to serve as catalysts is planned and made available.
3. School is recognized as part of, but not the sole perpetrators of, an integrated curriculum. We must involve the community, family, etc.
4. Avoidance of superficial integrations is assured.
5. Attack of central matters (staying alive) is not peripheral to teeth brushing.
6. There exists lots of room for flexible goal setting, searching, and revamping.

Integration of Courses at a Secondary Level (Group 3)

This group concentrated on relevancy and unity in the curriculum. The major concern was for a school which dealt with the student as a human being, not as a statistic. It was generally agreed that integration of subject matter, which may be plausible and even desirable in some areas and stages of learning, is less significant than experiences which allow students to find relationship not only between disciplines, but between themselves and this world.

Transcending all subject matter considerations as a vital goal is a real concern for turning kids on; or not turning them off. Subject matter is relevant only if the student becomes intrinsically involved in it because it is vital to him and his life.

This fundamental goal of being "turned on" means that the student has:

1. Curiosity - with determination to challenge in some cases and to pursue in others.

2. Courage - to tackle problems and take opportunities without fear of failure blocking his way.

3. Integrity - to work at the things he undertakes with personal sincerity.

4. Concern for quality - effort to grow and refine his experience.

5. Concern for others.

6. Confidence in himself and his ability to perform.

In attempting to accomplish these kinds of goals in education it will be necessary to reshape much of the processes and structure of the school. Specific areas discussed were:

1. The style of learning must allow for greater participation by the student in creating his own learning strategies. There must be a freedom for him to move; to experiment; to improvise; to make value judgments; to exercise options and to develop his own sense of order and pattern. He must be allowed to use his own logic, not merely mimic the logic of the adult world.

2. The concepts of school structure must be broadened. Lock-step scheduling practices and group tracks are undesirable. The student is not in school to become a cog in the educational machine. The school must serve the students' needs and interests not only for future life but for today.

To make this a reality, a curricular structure must provide a wide variety of choices. These would include not only courses defined by particular subject matter but projects and resources which could cut across subject areas. In the center of this curriculum would be libraries, language labs, and various remedial and enrichment programs which could be used by students in the accomplishment of their chosen learning programs.

Choices would not be dictated, but to a large degree would be elected by the student. There would be no prescribed sequence in many of the choices, rather a flexibility in time, order, depth, number, and a variety of curricular options.

Exploratory programs in several areas would allow the student to find interests by involving him in real experiences in the processes of a discipline. These could be either terminal or continuing.

Controls within this system will present many challenges which must be met with creative thinking and planning. Even as the student must get "turned on" the educators must move in their profession with curiosity, courage, integrity, concern for quality, concern for others, and confidence in themselves and the students rather than being satisfied with taking security in old habits and answers.

Several problems, such as teacher preparation, staffing and skills, politics, legislation, finances, labor demands, etc., were also discussed. It was felt that such fears were premature since, until such a program is formed, we are only expressing fear of change.

Other points raised by the group included:

1. A need for educational communication and relations between high schools and schools prior to and after high schools.

2. Insistence that high school is considered _a_ time for learning and not _the_ time for learning.

3. Concern for labeling students on the evidence of statistics based on educational systems which too often "turn off" intrinsic motivation, personal interest, and personal integrity.

Finally, the differences of people, their interests and views was dramatically demonstrated at this conference. Many of us were turned off at times in the two and one-half days we spent together. Imagine 180 days with many more people being imprisoned within a rigid mold like the traditional school.

The Philosophy of Deriving Behavioral Objectives: (Group 4)

The assignment for discussion here was originally the Technology of Deriving Behavioral Objectives. Since the group was not satisfied that outlining behavioral objectives was the most appropriate path to take in an approach to educational change, the term philosophy was substituted for technology. The substitution of philosophy for technology attracted several members to our group, and as it turned out, gave direction to the discussion.

These "senses of the group" are presented as tentative in as much as no attempt was made to develop specific consensus, or to agree on a common statement, but when an idea was presented cross questioning developed which helped to expand and qualify the idea. No general disagreements were verbalized during such development periods in the discussion.

Tentative Conclusions:

1. An efficient method, perhaps the only realistic method to be used in curriculum design is to block out a study, or to develop a tentative curriculum first, then through feedback from experience with the design, begin to formulate performance objectives, or through criticisms of the design try to formulate some tentative objectives.

2. This method would apply to all curriculum development regardless of the segment of the student population for which the course is designed.

3. There is a value in using a frame of reference external to the discipline (i.e., a conception of the kind of world into which the student may grow) to inform the design of the study. This would tend to make the study more relevant to the student.

(Recorder's note - Not all members of the group either fully understood or agreed with the above point.)

4. There may be a hierarchy in learning which could influence the design of the study, e.g., skills basic to a study need to be mastered before processes such as interpretation or appreciation should be attempted.

5. There are many designs or blocks of study now existing which should be studied by an ES '70 group to determine if any might be adaptable to an ES '70 project.

6. Possibilities for stating performance objectives specifically are not denied, but any realistic objectives must be derived from evidence gathered during experience with the course. There seemed to be agreement in the group that design is part of an experimental process and only by interplay between design and experience can curriculum be realistic and escape rigidity.

After lunch discussion continued as follows:

One member suggested that we should try to design a curriculum for secondary schools using present building blocks. We should not consider what the goals are in selecting materials, but should reverse the order. We should consider what is to be involved in the curriculum then after the ground work has been completed write the goals. Another member, however, pointed out that a definite commitment to goals would have to be made that performance objectives must be stated to insure measurability.

The question was asked, Is the spiral approach more effective in teaching than the thoroughness approach? Do we teach from the familiar to the unfamiliar? The group concluded that we must do each of these -- we must experiment to see which is the more effective. The pragmatic procedure will lead to definite goals.

It was emphasized that we could not expect to get behavioral objectives out of this conference. What then, should the conference do? It should facilitate the sharing of diverse opinions, record these opinions and view the following problem: "Given public education, what can we do to improve it?"

There are many ways to approach a problem. It was suggested that:

1. We outline a goal (not necessarily written).

2. Collect data and experiment.

3. Terminate with a generalization (not necessarily related to the outlined goal).

But a hypothesis does exist! Where do we begin? It was suggested that we lay out the tentative gross specification of an educational system; i.e., establish a scientific hypothesis.

Group response to this suggestion indicated a belief that this was not the fastest way to get results. We should start with materials and ask questions leading toward goals as we work with the materials.

A group member asked if there is a commitment that we proceed with curriculum change in a certain way. The group response was no, as long as what we do will lead toward the goals of public education.

A foreign language representative submitted that each language teacher has certain goals in teaching his subject. Oral and reading skills and comprehension are examples. His belief was that the curriculum is satisfactory but he is unhappy with teaching practices. There aren't enough capable teachers of foreign language. It was agreed that this was another matter for further discussion.

The question was raised, Can we move from present nationally studied material to writing a detailed course? It was agreed that we could.

The question was asked, Why should we attempt to integrate subject matter? The response was, we only want to increase the effectiveness of learning. However, in order to obtain effective cross-entry training of teachers, a reorganization of departmentalization in universities is necessary.

Again, the empirical approach was emphasized. It was pointed out that first one must obtain definite skills in any area and then intellectual and esthetic challenges can occur.

Rather than working with individualized disciplines, a suggestion was made that perhaps we should define objectives that cut across all disciplines. There should first be a meeting of people in the same discipline to list what it is in that discipline that is important. Then sharing can occur and work proceed in cross-disciplinary teams.

It was pointed out that one needs an external frame of reference, e.g., a life task analysis. This was defined as "What a youngster needs to learn in order to cope with his environment--preparation for the adult role." So far this has not been done.

The discussions ended with the thought that ES '70 should not lose what has been developed. Perhaps ES '70 has a larger external task than curriculum revision.

Vocational Education: (Group 5)

This group subscribed to the open-ended philosophy whereby each individual student can be helped to develop his maximum potential as swiftly as possible. They felt that vocational education is frequently regarded as terminal, but that all education should be considered a life-long process. Education should permit a person to choose early remunerative employment without jeopardizing his chances to extend his formal schooling, including college, professional school, or graduate school.

The group believed strongly that education should help every individual find his most productive role in the society in which he is forced to live as a self-supporting, tax-paying member. In order to facilitate this, we suggested that the established, evaluative criteria or suitably developed criteria be used to rate and reward educational management for producing measurable gains.

One of the approaches suggested for attaining the stated goals include the use of such resources as the college, industry, and other expertise; the introduction of broad-based curricular offerings such as occupational clusters; and the use of prime movers in small-group work phases of the ES '70 program.

Anticipated problems were grouped under the broad categories of funding, materials, and proper procedures to reach the stated goals.

Strong reactions were voiced against the stigma that has relegated vocational education to the "basement" and it was hoped that ways could be devised to upgrade and improve this image.

Humanities: (Group 6)

This group raised a variety of questions and responded as indicated:

Q: What are the goals of a high school education under ES '70 and what are creative ways of moving toward such goals? What can the humanities contribute to such an effort?

A: The humanities should not distinguish between groups of students on the basis of academic ability. The entire high school curriculum should be taught humanistically. Science, vocational education, and all courses should be taught in terms of issues and concepts that the humanities are generally acknowledged to include.

Q: What is humanistic education? What are some examples of procedure and methodology for implementation?

A: The focus of the humanities is to give people an understanding of what has been up to and how we got to be the way we are. To make education relevant we must inquire into the human heritage and what we have accomplished. We must concentrate on the human aspect of things and try to get that component into the curriculum. For example, the physics program has been humanized by emphasizing the human setting in which problems have been solved as well as the purely technical aspects of physics.

Q: Why should anyone be concerned with the humanities?

A: Because in these activities one deals with the nature of human possibilities. Degradation, evil, and sublime achievement are all human possibilities. Fiction makes what would ordinarily be unendurable available for contemplation.

Q: How do you approach humanistic education at the secondary level?

A: Imagination is required on the part of the teacher. He must be able to put the specific into a context that goes above and beyond in such a way that the specific becomes a part of a whole living experience - past and future.

There is not one answer, but answers which must relate student interests with what the teacher is trying to accomplish.

Consensus Statement: To conceive of a learning activity humanistically the following properties should be examined:

1. It should be thought of as an enlargement of the self. One should be able to detect some influence of self-awareness and a feeling of personal integrity as implicit in the activity. This need not be considered so much as an outcome of the learning, but as a property of it.
2. It should constitute some kind of examination or inquiry into human possibilities.
3. It ought, ordinarily, to deal with aesthetic properties.
4. Specific activities or events should be put in a very broad human context rather than on a private or individual basis. The classic humanistic question that can be asked is "How can this be?" With reference to a poem or play the question might be, "Who made it?" "How did he go about it?" A corollary to the classic question that is relevant to secondary education is, "What is it like to be like that?" At this point you can talk about physicists, carpenters, or dancers as people who are. We could take as one general aim of the educative process to make it apparent to youngsters what it is like to be like that. Role playing is one approach that might be used to achieve this goal.

Should the discipline centered concept be ruled out?

One member of the group expressed the view that it is not to be ruled out. An eight-year study has revealed that we are now primarily producing book readers and that we are losing our amateur artists and musicians. The great obstacle has been that by grade eight these people have been crowded out of the curriculum by the demands of academic subjects. To counteract this tendency, proposals were put forth for the integration of the humanities into other areas, but on the whole, this approach has not worked. Integration is one way to get more of the spirit of the humanities abroad, but at some point we have to ask, "What are some of the traditional outcomes of humanistic education and why are we not getting them under present programs?" One example of an approach to this problem is to set up two periods of independent reading per week as a substitute for two periods of English instruction. One of the marks of an educated person is that he has established the habit of reading books on his own. Unless this habit is firmly established the person is educationally dead.

Problems encountered in the transition from juvenile to adult book illustrate the need:

1. The developmental readers have not adequately prepared students to cope with the vocabulary of adult books. (The concept of introducing two new words per one hundred words to bring students up to the level of adult reading by grade nine.)

2. The literal-mindedness of students at this age causes difficulty in understanding such non-literal statements as, "A woman would be more charming if we fall into her arms without falling into her hands."

3. Many teachers have misstated the problem as a transition from the juvenile books to the classics, when in actuality the problem is one of transition from juvenile to adult books.

What should we do about College Boards?

One member stated that they should be abolished.

Another member countered with, "This sentiment sounds like a rationalization - we could do much better but 'they' won't let us." Consider these facts (and if even these modest requirements are enough to block ES '70, see E.T.S. and we will make any special arrangements that may be needed):

1. About one third of our colleges require college boards.

2. Most of these require only the three-hour Scholastic Aptitude Test, a test of verbal and quantitative ability -- independent of any particular course content. Basically it is a reading and arithmetic test.

3. The afternoon achievement tests offer one hour tests in eleven different fields, of which particular colleges may require one, two or three.

4. Most of the colleges that require any of these require only the English Composition Test - a test of basic writing skills.

5. The next most common requirement is a mathematics test.

6. A minority of these colleges require either one of the science tests or one of the foreign language tests.

7. The other tests are brought in by this type of requirement: English Composition and any two of the other achievement tests.

The group continued its discussion for a few moments seeming to reach agreement on the following:

Today's youngsters now see the educational system as a game in which the contestants are the students and the teachers. There is a trade off here; the student agrees to what the teacher requires provided he is rewarded with a certificate. Examples of this tendency can be cited from the elementary through graduate school. The humanistic approach offers a possible solution to this problem.

What constraints in secondary education must be removed?

1. Symbols and realities don't match
2. Inflexible school schedules
3. Stereotyping students and their programs
4. Demands on teachers which most can't meet
5. Lack of individualization of student programs
6. Underestimation of students' abilities.

What approaches can be utilized to individualize instruction for the 80% of the student population who are not going to college?

A problem of individualizing instruction lies in the teacher's access to resources and the ability to relate these resources to individual life needs and interests. When youngsters raise questions the teacher is required to be flexible enough to relate with the youngster and to have available resources to render that relationship educationally meaningful. Teacher education, both preservice and inservice, must emphasize these needs.

The humanities could serve as the integration aspect that we are looking for in ES '70.

The goals of humanities education should include:

1. Enlargement of the self--the creation of self-awareness
2. The examination of human possibilities
3. The development of aesthetic properties and awareness

4. The presentation of specific events in a broad context rather than on an individual basis

5. Understanding that man is a social being and not an atom.

Communications Skills: (Group 7)

This group suggested the following broad lines of assumption and policy for ES '70 curricula in the areas of language, visual arts, and music:

1. The prime goal of teaching in these areas is the nurture of the imagination.

   AMPLIFICATION: The phrase "nurture of the imagination" is perhaps a bit fuzzy. We are told that poems and stories and pictures are good things because they are imaginary. We are inclined to use the word "imaginative" as a term of praise. But what exactly can a developed imagination do that an under-developed imagination can't do? The answer we hold to is that the imagination is that power by which you and I make real to ourselves an inward life that isn't our own--someone else's feelings, state of mind, attitude toward and beliefs about himself. As Charles Cooley, the American sociologist, once put it, a central human obligation is that of imagining imaginations--imagining what another person sees himself to be, imagining how another person regards himself, imagining how another person imagines himself and his world; what his personal idea of himself and the world truly is. That power by which people make real to themselves the inward reality of others is never in large supply. But seemingly, to judge from the nature of recent social crises, it has been in especially small supply in this country, which until lately appears to have been composed chiefly of self-enclosed worlds (white, black, rich, poor, urban, suburban, etc.) each incapable of imagining the inwardness of the other. And if that argument is accepted, there cannot be much doubt that the teachers who work to develop imaginative power within students isn't simply fostering personal growth but undertaking a task of significant social utility.

2. The specific procedures of teaching by which the goal of imaginative growth is approached are non-prescriptive in character. They do not seek mastery of objective bodies of literary or aesthetic knowledge (e.g., a reading list of good books, a list of great works of

musical art, etc.). Nor is their center the mastery of a standard dialect, or of particular rules of syntax and correct usage. At the center are procedures whose immediate aim is to place the child in the class hour in situations in which he uses his imagination, exercises it, gets it into the acts of daily life.

AMPLIFICATION: The strategies and devices most useful in the development of imagination are of course best talked out by master teachers and other teachers working together in seminar, drawing on practical experience as they go. ES '70 should start now to lay plans for such seminars. Procedures will tend to be of two kinds. The first use the materials of literature, visual arts and music--stories, poems, pictures, the blues, pop songs, TV programs, high art--as occasions for the student to begin asking himself questions about what it would be like to be this or that character, not himself, in this or that human situation--not his own situation. For an elementary school child such an occasion might amount to a question: Why did the fisherman in the Grimms' story not wish to leave the hut that was his home? How exactly did the hare feel when he saw that he had lost to the tortoise? For the high school student, more complex human situations and feeling are to be brought into view.

The second set of procedures are aimed at expanding the child's range of verbal experience. Our imagination of the realities of life known by someone not ourselves often depends upon what we can imagine that person saying to himself. The limits of human knowledge may well be the limits of my language; if I can't speak the language of joy or of playfulness or of gloom, I can't make these responses real to myself at any other moment except when I myself am experiencing them. It is through speech--especially through speech embodied in poems and songs--that I am most immediately taken into the act of another person's state of mind. Hence the necessity not only for reflective reading and talk about human situations, but for this second kind of teaching procedure: concentration upon the development of the articulate pupil, the pupil who is easy and familiar with wide varieties of expressed human feelings and response.

3. Correctness in speech and writing is best thought of not as an absolute to be struggled after as a value in itself. The teaching aim is to open up the student to his own investigation of self and others, and to encourage him to express and to criticize his understanding of life situations. When communication fails because the student's immediate audience cannot understand his dialect or usage, then the teacher is free to offer

corrections aimed at bettering understanding between speaker and audience. Corrections in the name of mere "manners" are rarely useful.

AMPLIFICATION: Men talk and write to make themselves understood and to clarify their thoughts and their experience. They do not talk and write to be "correct." When, however, a man urgently wants to say something in an understandable fashion, something that matters to him, his interest in "correctness," in those rules that insure fuller understanding between men, is invariably strong. Good teaching in this area need not be hostile to "correctness"; it must recognize correctness as one device among many helpful in achieving communication goals higher than that of social propriety.

4. The argument for teaching that seeks exercise of the power of imagination by individual students is not simply that it strengthens a neglected human faculty. The argument is also that it can create an appetite for experiencing art and can contribute to the development of a larger, better informed and more demanding audience than presently exists.

AMPLIFICATION: The artist is himself often a man engaged in imagining the reality of this or that particular moment of experience--e.g., precise quality of feeling in the confrontation by Priest and Crown at the beginning of Oedipus the King; or James Dickey's description of each stage of the descent from consciousness of the airline stewardess thrown down through the night sky from her plane. Both writers are engaged in imagining the personal idea, the personal sense of self, in a moment of time. Poems and plays and stories are acts of imagination, as are works of sculpture, films, love songs, dance movements. They cannot be entered or used except by people who themselves undertake an act of imagination. And to say this--to say that literature cannot be read or pictures or music enjoyed or used except by trained, exercised imaginations--is to say that nurturing the imagination and nurturing an audience for the arts are one and the same activity. We are talking here, obviously, about the problem of "leisure" as it will emerge for all classes in the decade to come. We are also saying that it is not only an intensely significant social need that is served by the teacher who works to develop imaginative faculties; it is also the cause of art as a whole.

One final word: No part of this statement should be taken to imply that the world of the arts is uniquely the world of the imagination. As must go without saying, no work that matters in science, in any field of study, is accomplished unaided by the imaginative resource. Our claim is simply that the nurture of the imagination of human feelings and human situations is especially feasible in the arts side of the integrated curriculum because of the primacy of these feelings and situations in works of the aesthetic imagination.

Substantive and Political Considerations with ES '70: (Group 8)

The following comments and critique rose out of the discussion by the 20 or so members of the ad hoc group which met Thursday morning and afternoon to discuss the scope and purpose of ES '70.

A. Substantive Comments

1. The real issue for modifying the curriculum content for high schools is not when to teach what to whom but how to involve the student in the learning process so that he learns how to learn, and develops an intrinsic desire to continue his learning.

2. Materials must be geared to the frame of reference of the students, but care must be taken not to limit the material to his present knowledge or interest but to use the frame of reference as a point of departure, leading the student from his present level of educational attainment and understanding to higher levels.

3. The creativity and artistry of the curriculum developer should not be constrained by artificial structures which prevent maximum interaction between objectives and content. Behavioral objectives and subject matter are closely inter-woven in such a fashion that it is difficult to establish one before the other.

4. A variety of curriculum materials should be developed so that a teacher can tap a full range of instructional materials and approaches in order to better adapt to the learning styles of different students. ES '70 should provide alternative pathways with appropriate checks of a given student's progress.

5. Relevance of a curriculum may be a function of the degree of motivation of the student. This pre-

disposition, of course, is frequently derived from the student's vocational or avocational interest in a given subject. Such interest should, however, serve as an opening wedge in leading the students to a more profound involvement.

6. The curriculum material should be adapted to the learning style and the frame of reference of the student, but it should also be designed to exploit the best developed capability of a teacher. Those who lecture effectively should be able to adapt their materials to that mode of instruction. Those who are more skilled at seminar type discussions or tutorial approaches should be permitted to exploit that form of instruction.

B. Strategies for the Implementation of ES '70

1. Teacher training and involvement in the curriculum design process are essential steps if we are to gain the acceptance and support of the rank and file teacher.

    a. Such training should start with the development of awareness of the broader purposes and potential contributions of the various subject matter fields to the attainment of the ES '70 goals.

    b. Teacher participation must be recognized as essential in planning for the use of new curricula.

    c. Teacher planning teams may assist curriculum integration across subject matter fields. This has been attempted in the Richmond Pre-Technical Education Program with some success.

2. The use of a highly-structured systems approach to the implementation and validation of the new curriculum material may violate much of what is important in ES '70. Demanding that teachers and curriculum planners conform to a strict behavioral orientation may well subvert the pluralistic approach which is essential to ES '70.

3. Computers and other audio-visual devices may well be frosting on the cake. Without an appropriate curriculum and a logical means by which separate subject matter fields and individualized materials can be linked together, horizontal and vertical articulation is not likely to be achieved.

4. When materials become available, teachers should have the opportunity to choose from among a variety of instructional units or programs tailored to their particular style of teaching.

5. Emphasis on evaluation of the curriculum projects at all stages of ES '70 must be recognized. Some of this can be achieved through the building of a truly effective communication network among the ES '70 schools.

6. The dollar requirements for building an ES '70 program are at this stage underestimated. A significant multiplier may be achieved if materials are available for purchase and utilization by State and local departments of education.

C. Political Issues Re ES '70

The curriculum development representatives at the conference have a strong sense of commitment to their creative artistry and therefore resent the encroachment of the behavioral technologist on their domain. Fortunately, the urgent requirements of those representing the schools were such to make the curriculum development people aware of the present day limitation of even the most recently designed curriculum. It is hoped that the behavioral technologists can provide a more effective bridge between those who have traditionally carried the responsibility for curriculum design and those who represent the constraints of the classroom. Without some way of establishing objectives and assessing individual student's progress towards those objectives, the investments in curriculum development may continue to be fragmented, overlapping, and full of gaps.

A New Educational System: (Group 9)

This group was composed of high school students from some of the ES '70 schools and the New Orleans area. They met together for two days developing the following plan which was presented to the rest of the conference delegates by a panel of five students.

The basic problem with education is that the subject matter doesn't fit the needs and interests of individual students. We believe that this problem cannot be solved by the present educational system and that sweeping changes will have to be made.

In order to make learning in high school more relevant to us, the students, we propose a new educational system with the following objectives:

1. Expose to the student a wide variety of learning areas--a wide range of subject matter alternatives, so that the student can become acquainted with a majority of the fields and later choose his profession more knowledgeably.

2. Instill in the student a desire to learn. We feel this is very important in high school where the student who has the desire to learn will profit much more from his education.

To accomplish these objectives we suggest a new educational program. The same academic courses which we are now taking in school would be included, but academic experiences would be alternated with vocational experiences if the student desires. School and business could cooperate in educational programs where students would experience work as practice observers. Students would take basic courses in school but they would also take relevant courses from business and industry in preparation for their future economic roles.

Students would have the opportunity to enter a vocation for one or more terms at a time, and return for more academic education if and when they choose to do so. Such experience would give students a taste of specific vocations while they are in the high school learning situation. They could alternate this learning activity several times if they wished, spending a term on a job, another in school, the next on a different kind of job and so on until they had an idea what career direction to take. We think one of the major problems we face is having to choose careers before we really know what the alternatives are.

Basic academic courses would be required in our new program, but if a student is doing poorly he could enter groups which present the subject through the instrument of his vocational interests. For example, if a student is interested and talented in mechanics or electronics but is flunking English, and he doesn't give a darn about Shakespeare and Hamlet, groups could be organized where he could learn English in the context of his interest. He could talk and write about mechanics or electronics or whatever his interest is and be learning the English language.

Academic students would follow the same program, tasting the vocation of their choice or continuing intensive academic studies. It wouldn't matter whether students were college bound or planning to enter a vocation after graduation; they would still be able to get what they need from the program.

Also, courses would have no grade levels. There would be pre-requisite courses that would have to be completed before going into more advanced ones, but there would not be any 9th, 10th, 11th, or 12th grades.

We think the educational program should be extended from K through 12, as we now have it, to a 13-year program. However, students shouldn't be forced to stay in school that long if they can go through more quickly. The 13 years would be the maximum before graduation from high school.

Students should be able after evaluation, to be placed in ungraded courses. If the student is good in music, or mechanics, or something, but is flunking his academic courses, he could request that these courses be ungraded.

We feel that this program could be worked into our high schools today. We think it would solve many of our problems, especially in the inner city schools, where we could prove to students that education is relevant to what they are doing by making it so.

We think the program should start in high school but eventually be linked and adapted to both elementary schooling and college.

We think there would have to be some changes made in teaching methods too. One thing we believe to be of great importance would be more flexibility in courses. We shouldn't have to take tests and final exams for which we have to prepare by memorizing a lot of things. Students need a flexible atmosphere where they can go off on any kind of learning tangent they want. Students will listen to something they want to hear and will learn far more than if someone tries to make them listen to things in which they aren't interested.

There should be much less time given to lectures. Students want more outside reading and in-class discussion of outside reading. The ideal would be to create a more informal atmosphere in the classroom. More student-teacher discussion would help to eliminate the impersonal attitude existing between teachers and students. There should also be more student-student discussion with the teacher keeping out of the way, and letting the students argue about a point if they want.

We think teachers will have to be re-trained in order to become aware of how important these things are and to learn new methods of teaching.

The panel of five students finished their presentation with the following statement:

> "We are proposing a very different kind of educational system than the one we now have. We didn't sit down and dream it up, and pose it in order to come up with some beautiful, idealistic educational program like Summerhill or something. We feel that what we have proposed could easily be incorporated into our education now. We're not talking about things that are never to come true. We want them to happen. We're interested in working with the authority groups to make them happen. We don't want to sit here, and present our ideas and then go home and leave it up to everyone else here. We want the student body to take part in shaping the new education and making it go."

The panel then called for questions from the floor. Some of the questions simply elicited a repetition of what had already been said. Others expanded or clarified the ideas that had been presented. These questions and responses are included as follows:

Q: You outline beautifully the whole process of business or industrial experience. I'm curious about whether you are asking the high school to provide relevant experiences inside the school, experiences with relevance to questions about politics or human adaptivity?

A: When we're speaking of vocational students we're speaking of everyone. Everyone goes into a vocation eventually. We're saying that an academic education in college is a vocation too. If a person is interested in psychology, and wants to see what it's like, great, he could spend a term in college working with a psychologist. Or, he could take some courses in college in cooperation with the high school.

Q: It seems to me you've been concentrating on the difference between the academic experience and the work role. What about the citizen role? Shouldn't students learn to be good citizens too?

A: Yes, we did discuss this, and we said this could be achieved by getting students involved in issues that interest and concern them. What if they wanted to get rid of a bad teacher, how would they go about petitioning the principal? Students could learn about politics by becoming involved in the issues that are of immediate concern to them in their lives.

Most students don't care about student council because they don't care about the school, but if you make school more relevant to them they will care and they'll want to be involved in student government.

Q: You suggested a 13 year program--should it be a 9 month or a 12 month school year.

A: We'd like to further continuing education even beyond 13 years. It should be forever, allowing a person to stay in as long as he wants and take as many courses as he wants. If such a plan could go into effect and people loved school and wanted to learn there would be no need for a uniform time for school to break. Have school the year around with some students leaving for work, others coming in for courses any time of the year and forever.

The Last Day of Conference

On Friday morning the delegates met in general session to decide on how to utilize the remaining few hours. This was a test of the value of the conference. A lot of different people from different professional backgrounds, with many different ideas, some of these ideas often in conflict, had been brought together to pool their resources to help assure the success of a curriculum revision effort with which many of them had had little previous acquaintance or sympathy. Now what had gone before had somehow to be pulled together into a more definite direction for ES '70.

The design for the morning included the following:

1. A brief opening by Wells Foshay indicating hoped-for outcomes of the mornings' work.
2. A fifteen-minute presentation of the report by the student panel (presented in the foregoing section).
3. A fifteen-minute floor discussion of the student report (also summarized in the foregoing section).

4. A statement by David Bushnell indicating the kinds of help he would like to have from the various sub-groups attending the conference. These are outlined as follows:

   a. Groups 1a, 1b, 1c (ES '70 representatives including teachers, students, administrators)

      Topic: What kinds of help do you want from outside resources?

   b. Groups 2a and 2b (professional association representatives)

      Topic: What kinds of continuing relationships would you recommend between ES '70 and the associations?

   c. Groups 3-9 (Subject matter groups)

      Topic: What projects would you like to see developed outside ES '70 that would be available to ES '70?

   d. Group 10 (Behavioral Science)

      Topic: What help could behavioral science provide?

   e. Group 11 (Federal Agency Staff)

      Topic: What have you heard in the conference of value in your relationship with ES '70?

5. Work in the above groups -- 15 minutes to brainstorm and list ideas on newsprint without evaluation and 15 minutes to set priorities. Groups were asked to choose one or more ideas to bring on newsprint to general session.

6. General session to hear ideas produced.

As the groups returned with their ideas, it became apparent that there had been some disagreements as well as consensus. At this point Wells Foshay, chairman, stated that Jerrold Zacharias had asked for opportunity to speak briefly. He spoke as follows:

> "I asked to speak because I have detested, as I think many of us have, an underlying mistrust between some of us, which I'm afraid may well grow

> into a rift. I would not like to see that happen. I think it is clear to most of those who have spent a major part of their professional lives in devising curricula, that the general objectives of the ES '70 program are laudable. They're just fine. Many of us, I think everyone in the room probably, has thought of some scheme to try to implement the program and to find out how to work through one of the hardest problems that ES '70 faces. ES '70 is taking on a job that, so far as I know, has never really been done. How do you integrate curriculum for a student who is interested in internal combustion engines because he thinks that all he ever wants to be is a mechanic? He is only interested in cars. How then can we create an educational program that will help him learn enough mathematics, physics, chemistry, and biology in the context of internal combustion engines that he can become a mechanic if that is what he ultimately wants without having that his only option? How do we build into what he wants to do enough social science, psychology, and communicative skills so that there is a higher ceiling for where he can go? He can end up in any kind of thing, including, if that's what he chooses, sweeping out filling stations but the option will not have been set prematurely. He can go up hill, he can go down hill. We've set ourselves a task that is hard to accomplish. I would like to make a simple plea - that there be enough tolerance, on all sides, for all of us to handle the problems that stem from the difficulty of the job. This is a terribly hard thing to do. Each of us thinks of our own way to do it. Naturally, each of us thinks our way is best, but naturally - otherwise we would think of another way. Or we would do some other person's best way. If I happen to love internal combustion engines, let it be. All I ask is the freedom to work with an internal combustion engine. If someone thinks he can get these kids turned on and moving in a special way, lets give him that freedom. If someone has some special idea, let's enable him to test it. I want the Office of Education to be able to foster and support this variety of activities. Let's make room for and use our differences."

There was a burst of applause as Professor Zacharias concluded. His statement was timely and it had the effect of relieving tensions. Direction but with diversity seemed to be the guideline for ES '70 development. The chairman then turned to the individual group reports. Each group had selected a member to read the ideas and suggestions recorded on newsprint. This permitted a few questions from the floor and brief discussion for clarification. The group reports follow.

ES '70 Groups

Group 1 A wanted:

1. Access to resource persons who have had extensive dealings with the disadvantaged.

2. A nucleus of Master Teachers, in all subjects, to train ES '70 teachers. There should be financial incentives for such teachers.

3. Establishment of an apprenticeship program with business and industry in relation to the educational program.

4. Establishment of a minimum nutritional level for all students in ES '70 schools.

5. Development and utilization of multi-media instructional devices on an individualized instructional program (less emphasis on T.V. and more on A.V. cartridges).

6. Consultant help to develop and select A.V. equipment and materials for student use in individualized programs.

7. Expansion of the counseling program to include psychological and family counseling on a school-wide basis.

8. Development of a mental health curriculum. The group felt that a nucleus of Master Teachers was the priority need right now.

Group 1 B presented as its top priority idea the suggestion that there must be developed specific procedures for diverse groups to work together and to continue the dialogue started at the conference.

Group 1 C came in with a number of questions considered important for further inquiry and clarification. They listed:

1. How do we organize to get groups to work together?

2. Who will take the initiative of implementation and design of ES '70?
3. What is our job? Once we know this, we can decide how.
4. How can we get involvement?
5. How do we phase in a different program?
6. How do we re-train people?
7. How do we get more interaction and exchange between ES '70 network schools?
8. How do we get supportive teams making active contributions?
9. How do we establish on-going dialogue?
10. What kind of money do we need? Where is it to come from?
11. How is money to be distributed in regard to the team?
12. How do we organize industry and the community?

Professional Association Representatives

Group 2 A made these recommendations:

1. We need to plan for an effective interchange of ideas among ES '70 students, teachers, administrators; the U.S. Office of Education; the associations.
2. We need to consider how the associations can give more leadership in providing direction for the U.S. Office programs.

Group 2 B reported:

> As a result of this conference we recommend that there be developed specific procedures and mechanisms for diverse groups to work together and to establish an on-going interdisciplinary dialogue.

Both groups felt that a good beginning had been made and that it was very important that the groups continue to meet in the future.

Subject Matter Groups

These groups reported on projects they would like to see developed outside ES '70 that would be available to ES '70.

Group 3 (Communications)

1. Support for teacher training projects that aim at introducing ES '70 teachers to ways of awakening the intuitive, immediate, dramatic, sensory powers of students to the life that is going on around them here and now, in and out of the classroom.

2. Support for investigations into subject matter fields to accomplish these ends.

3. Consultants with knowledge of and experience in presenting subject matter in dramatic terms to help create teacher training projects for ES '70.

Group 4 (Art)

1. The whole man has these capacities: perceptual, intellectual, emotional, intuitive. This group recommended an ES '70 program that would strive to develop all of these capacities. To have an integrated curriculum we must focus on an integrated person.

2. Such a program should build on an elementary level base and lead naturally and easily through higher education. Specifically, we need to provide students with more experience in hearing, seeing, moving, etc. We need to realize that all our sensory capacities are needed and can be used in the learning process.

Group 5 (Humanities)

This group recommended that curriculum planners and developers design projects addressed to the question of relevance of what is being learned to the lives and affairs of students. They hoped that the planners will not overlook the various dimensions of living - social, economic, political, intellectual, aesthetic, and spiritual.

Group 6 (Vocational Education)

This group was concerned that a vocational school was not included in the present ES '70 program. The group made these recommendations:

1. There should be early introduction of career information into the elementary schools.

2. Present state curriculum centers should function actively in helping build ES '70 programs.

3. The Educational Committee Chairman of the National Association of Manufacturers volunteers that the U.A.M. will be meaningfully involved in the ES '70 schools.

Group 7 (Science)

1. An organizational structure should be designed to coordinate the work of both ES '70 schools and groups and curriculum developers without duplicating efforts.

2. A research program should be established to evaluate existing courses, particularly in relation to ES '70 goals.

Group 8 (Mathematics)

1. The U.S. Office should bring together representatives of the mathematics curricular groups and teachers from the ES '70 schools to start a project on the teaching of mathematics to vocationally oriented students.

2. Precautions in the setting of behavioral objectives should be taken to prevent the minimum achievement from becoming the norm.

3. This group was concerned about beginning curriculum revision so far up the school ladder and hoped that beginning at an elementary level will be considered.

Group 9 (Social Studies)

1. The many recent and current efforts of curricular approaches to career guidance (and the cultivation of occupational awareness) should be acccumulated and systematized.

2. An annotated summary and review of social studies curriculum projects should be provided for selection and use and evaluation by the ES '70 network and other systems.

Behavioral Science

Group 10 suggested that ES '70 should ask behavioral advisors to:

1. Assist in the description of outcomes
2. Assist in the development of techniques for the assessment of outcomes
3. Examine researchable questions such as:

Classroom design

Media construction

Cognitive processes

Behavioral objectification

Teacher-student interaction

Life roles in society

Federal Agency Staff

Group 11 recommended that ES '70 establish opportunities for continuing communication among interested groups and that ES '70 tap the existing resources for developing alternative approaches to the achievement of program goals. The importance of pluralistic approaches was stressed.

Conclusion

The conference ended with an informal exchange among Wells Foshay, Louis Bright, and David Bushnell, and a comment by Charles Whitner. The text of their conversation follows:

Foshay: Let me start by asking you, Dave, how you feel about conference.

Bushnell: I feel humbled and optimistic. The insights that I've gained in the last couple of days have been very special. They suggest significant modifications in the program statement. I feel that we are in a much better position now to relate to some very creative people. I like some of the terms I've heard used here, like cross fertilization. I agree with Dr. Grennan's comment that we are in the process of trying to design a bridge across the river and it is in this design process that hopefully all of you will become involved. I know that Lou Bright has had some thoughts - Lou missed the day of confrontation and came in at a more optimistic time. Lou, perhaps you'd like to say a word?"

Bright: There's one thing I've heard here that indicates a point upon which we are all in agreement. That is, that our special interest is in the student. But, I'm afraid we haven't really identified what student. This is something that most of us take for granted. If you look at the priorities that have been assigned to the U.S. Office of Education by the President, Congress, and by the Secretary, you find that the Office is primarly interested in those who are not now getting a decent education. These are largely students in ghetto schools and isolated rural schools. Our entire priority program is directed toward these students and not those who are getting a good education. So when you talk about programs to be supported by the Office of Education, I ask you to remember that the underlying priority is to reach those students who are not now being reached in a reasonable manner.

There is one thing that disappoints me in this conference, and that is the lack of communication between the subject matter authorities in their particular disciplines on one side, and their behavioral colleagues on the other. I think I'll be immodest enough to claim to belong to both camps. I feel that the real promise for curriculum development is to get these two groups to indeed communicate with one another. I think again, picking up some of the other terms here, that we should also have sufficient diversity to approach parallel alternatives from different points of view. I think it's worth trying both ways - that the problem is large enough to justify trying both.

Bushnell: I was impressed by the degree of agreement that exists between these two camps. The other day I heard one of the discipline specialists saying, 'the real issue is not when to teach what to whom, but how to involve students in a rewarding experience so that they not only learn how to learn, but that they acquire an intrinsic desire to continue learning.' That sounds like something a behavioral scientist would say. Someone else described the building of materials that are 'geared to the frame of reference of the child.' He saw that as a point of departure, however, not an end in itself. He said that by using appropriate experiences in the child's environment, you could even explain the concepts of Keynes Economics. Yesterday another person here said, 'We should avoid forcing the curriculum into some constraining structure so as not to destroy the creativity and artistry of many teachers and curriculum developers.' These things cause me to feel optimistic.

I'd like to pick up on two other points here. One, it seems to me that the major difference between these two groups is primarily in terms of the feedback mechanisms they use for the revision of materials. Both groups get feedback - both groups revise. I don't think that the communication should really break down on the study of objectives. I think the difference is simply in the feedback and revision sequence.

The second point I'd like to make is one that causes the ES '70 program to be complicated and difficult, the fulfillment of the student group request for flexibility. They want a program that will enable them to go to school for a term, drop out for vocational experience, return to school, etc. They'd like to be able to change programs without having to go back and repeat a year of school. In other words the various options for the sophomore year should, insofar as is possible, provide reasonable prerequisites for entering a wide variety of courses at the junior year. An extensive degree of flexibility for the student means Don't lock him into a single track. This will require a considerable amount of coordinating and planning between different units and different programs. This request is a real challenge for the ES '70 effort.

Another point - I think we should put our minds and not just our hearts into really listening to what the students are saying to us.

I think at the very least that the ES '70 network of schools provides a staging area for some of the continuing research and development; that in that network will be established a climate of support and understanding both on the part of school administrators, teachers, parents, students, and others in the community. It ought to provide a way in which research and development people can work more effectively with teachers.

Bright: I'd like to make one more comment, I think one thing I've gotten from the conference is that there is a tremendous amount of interest in the program from people in this room. Our problem now is how to maintain communication with these groups and get them actively involved.

Foshay: I think the time has come for us to express appreciation to Dave and the Staff of the U.S. Office of Education and the National Science Foundation for their hard work in planning this conference and arranging for many of the participants to be here; and, of course, to thank the N T L Institute staff for their very effective work in bringing it off. Mr. Whitmer?

Whitmer: I'd just like to add a word on the role of the National Science Foundation in relation to this. It has been mentioned that we have cooperated. We are eager to see this project get ahead. I'd like to point out one amplifying statement about the Foundation's support of science and mathematics education. By legislation we are limited to science and mathematics. We therefore are able to cooperate in those areas with other agencies in any ways that are effective. We have not confined our support either in teacher training or in course of content development to the college-bound student. This, I think, is a misconception that sometimes arises. Some of the early projects and some of the massive projects were intended to produce curricular materials for existing courses in high schools; and some of these were oriented toward college-bound students. Nonetheless, it has been found that other students have profited by this and particularly at the elementary level, materials that have been developed in science and mathematics are being used very effectively in the ghettos and major cities of the United States right now and in Appalachia, so I think that there are materials that have been developed that are directed to the lower level of student that is the major concern, apparently, of the ES '70 approach. I think our programs do fit in as a starting mechanism and I hope they will be used effectively by scientists and mathematicians as a supplementary and cooperating kind of effort in any way that is effective, and particularly the corps of people that are here can be very productive and effective in this more integrated venture.

Foshay: Thank you. On behalf of the people who worked on the conference and those of us who were participants, I want to express our appreciation; especially to the students who joined us and the members of the ES '70 schools and the ES '70 Network. Thank you very much.

Editor's note:

Lucille Schaible, Conference Editor, has derived implications for the future from the conference report. These are included in the Conclusion, pages 130 to 138.

Chapter VI
The Quincy Story

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Seidenberg /1/ has incisively commented, "Modern man has learned to accommodate himself to a world increasingly organized. The trend toward ever more explicit and consciously drawn relationships is profound and sweeping; it is marked by depth no less than by extension." In the United States, the first systematic approach to organization, and the first comprehensive attempt to find organizational universals, is dated 1931 when Mooney and Reiley published Onward Industry./2/ Since that time various ways of understanding organizations have developed. Scott /3/ categorized these ways of understanding as (1) Classical, which studied the anatomy or organization and provided the basic concepts of division of labor, scalar and functional processes, structure, and span of control, (2) Neoclassical, which asserted that the above classical concepts needed to be modified by the fact that human beings operated organizations and, in so doing, they created informal networks which could and did radically modify the way span of control, division of labor, etc. actually worked within the formal organization, (3) Modern organization theory, which is conceptual-analytical based, relies on empirical research data and, above all, is integrative in nature.

The events about to be described are most easily understood as actions, transactions and outcomes which may transpire when a school system undertakes the task of simultaneously trying to understand itself as an organization, and as the new understanding grows, changing its own organizational nature according to a basic principle of increased participation, at all levels of the school system, in decision making.

The principle of increased participation in decision making is clearly supported in some modern organizational theories. Bennis,/4/ for instance, has characterized the social structure of those organizations which will go beyond the bureaucracies of the industrial revolution as, "Adaptive, rapidly **changing temporary** systems. These will be 'task forces' organized around problems-to-be-solved. The problems will be solved by groups of relative

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1 Seidenberg, R. Post Historic Man. Boston: Beacon Press, 1951.

2 Mooney, J.D. & Reiley, A.C. Onward Industry. New York: Harper & Bros. 1931.

3 Scott, S.G. Organization Theory: an overview and an appraisal. Journal of the Academy of Management. 1961, 4, 7-27.

4 Bennis, W.G. Beyond Bureaucracy. Trans-action. 1965, 2, 31-5.

strangers who represent a set of diverse professional skills. ... People will be differentiated not vertically, according to rank and role, but flexibly and functionally according to skill and professional training."

What follows is the description of Quincy's ongoing process of developing participative school system decision making.

In recent years educators have been forced to come to grips with the oft-heard challenge that learning experiences offered to young people in the public schools are simply not in touch with reality, let alone what is projected as the future. Concurrent with this developing awareness is the recognition that authoritarian, line-staff patterns of organization for decision making do not result in critically needed behavioral changes on the part of the more than two million of us who make up the educational establishment. In a complex and changing organization, the traditional practice of dictating decisions from the top to acquiescent subordinates does not work--and is, indeed, obsolete.

Now the emphasis is and must be on participation in the decision making process. It is a truism that he who is to be affected by a decision must be involved in the process of making that decision.

Participation or involvement in the decision making process are terms that must be defined operationally. They can best be defined by those who will be affected by a given decision. They take on meaning concurrent with problem identification and must be formalized prior to any attempt at problem solving.

Group involvement in the decision making process does not mean motion without direction. It does not mean abdication of responsibility by those in positions of leadership in order to appease the apathetic, the uninformed, or the radical. It does not imply a devious round-about way of engineerng consensus. Group involvement in the decision making process suggests power with people and not power over people. It assumes that he who has shared in the development of a decision is more personally committed to the decision and has a vested interest in seeing that action follows decision.

There is a growing body of research to validate the importance of group involvement in decision making. Research by social psychologists has shown that the acquisition and exercise of problem solving skills is affected by the sheer presence of other persons. At the most elementary level some experiments

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outlined by Zajonc /1/ show that the presence of others increases the individual's level of motivation. The experiments reviewed by Zajonc report the following:

1. Participants report that an urge toward greater speed is produced by the activity of others, and they report greater emotional excitement (and distraction) than when alone.

2. The largest performance gains occur for individuals who give evidence of having least interest in the task itself.

Zajonc cites further evidence which can be interpreted to mean that social conditions increase motivation for high task performance.

For several years the educational community of the public schools in Quincy, Massachusetts has been attempting to decentralize and make operational group participation in decision making. While the need has been recognized, the skills needed to effect such a change are still embryonic. And, although the achievements to date are modest, but visible, the commitment to the process is deep.

Historically the Quincy Public Schools have been linked with innovation in public education. F. W. Parker, colleague of John Dewey in founding the University of Chicago Laboratory School, served as Superintendent of Schools from 1875 to 1880. During that period he brought national recognition to Quincy to the point where Merle Curti, the educational historian, has suggested that progressive education in the United States virtually began in Quincy.

In a more contemporary sense, the present period of renewal of the teaching-learning process in Quincy began within a year after the 1963 appointment of the now former Superintendent of Schools, Robert E. Pruitt. The events of the past six years chronicle the efforts of an educational community of 850 professionals to make learning more relevant and individualized for the nearly 17,000 young people enrolled in the public schools of Quincy.

A great deal of emphasis has been placed on participation by staff in decision making. The process of involvement has been,

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1 Zajonc, R.B. Social facilitation. Science. 1965. 149, 269-274.

is, and must continue to be evolutionary. Involvement has not been defined in explicit concrete terms. A PERT chart for participation has not been developed and it is doubtful if it could. Human behavior, trust, and commitment cannot be automated and no effort has been made to project such development on a chart.

Early in the present period of renewal activity the administration shifted from solely advocating changes in curricular offerings to recognizing that there was a prior need to examine and establish a climate for change within the school system. While convinced that many program offerings were no longer relevant to the needs of young people and that teaching strategies were in many instances not consistent with what is known about how young people learn, the administration concluded that if any curricular changes were to take place, emphasis must first be placed on establishing a climate for change. Miles /1/ has pointed up the need for school systems to consciously create a climate which would support growth and development. He states, "The problem, in effect, may not really be a matter of getting specific teachers or administrators to accept SMSG math, team teaching, IPI, or any one of a hundred specific acronymic inventions. Rather, ... anything that could be done to induce a general climate of inventiveness, creativity, willingness to take risks, or excitement, would in principle make it a lot easier for a school system to devote more of its energy to rebuilding itself."

A change in climate in Quincy was something that could not be dictated or legislated; it could come about only when there was a feeling among teachers that their needs and ideas were recognized as important, that their views would be listened to, that innovation and change could start at any point or level in the organization and that vehicles for true participation in the decision making process would be developed.

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1 Miles, M.B. The development of innovative climates in educational organizations. Stanford Research Institute Research Note EPRC - 6747-11. 1969

ES '70 (Educational Systems for the Seventies) /1/ -- The current apex for involvement centers on the 1967 decision by the Quincy Public Schools to accept the invitation of the U. S. Office of Education to become a charter member of the ES '70 network. Over 400 educators, the entire secondary school staff, participated in that decision.

The invitation to join the network was extended to Quincy in recognition of innovative efforts in Projects ABLE /2/ and PLAN /3/. Meaningful involvement in the decision to accept the invitation of the U. S. Office of Education was made possible by Quincy's prior experience in Project Q-PED-COPED.

The process of involving 400 teachers in the decision to affiliate with ES'70 necessitated the cancelling of classes for one whole day early in June, 1967 so that all affected by the decision could come together in a day long workshop and share in the decision making process.

Approval for the institute day was given by the School Committee. Arrangements for the workshop were made by the administration, the Quincy Education Association, and resource people from Boston University Human Relations Center and Lesley College.

Two weeks prior to the institute day each of the 400 secondary teachers received a copy of the ES'70 network proposal.

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1 ES '70 is a network of 18 school systems from 14 states. The purpose of the network is to implement the results of educational research in order (1) to make learning experiences relevant to the needs of the time, (2) to adapt programs of instruction so as to be responsive to what is known about learning styles of young people, (3) to make sophisticated use of media and technology, and (4) to provide ongoing opportunities for inservice training.

2 Project ABLE is a joint effort of the Quincy Public Schools and the American Institutes for Research, supported by federal funds, to develop an individualized program of instruction at the secondary level for non-college-bound young people.

3 Project PLAN is a joint effort of the Quincy Public Schools and the American Institutes for Research and 13 other school systems to develop an individualized program of instruction in grades 1-12. The computer is used as a managerial tool. PLAN is funded by the Westinghouse Learning Corporation.

The Quincy Education Association assumed responsibility for structuring the program for the day. The teachers were divided into 27 groups of 15. Each group was organized to give balance to junior and senior high school teachers as well as to the several academic disciplines and departments. The day opened with each group meeting in a separate room and discussing for two hours the project proposal. This was followed by a general assembly where all 400 teachers came together in a school auditorium and for two hours addressed questions to a panel of administrators and teachers who had participated in earlier talks with the U. S. Office of Education relative to ES'70.

Following a leisurely lunch hour when discussion continued informally, the original 27 groups re-assembled in their separate meeting rooms and assessed the events of the morning, including the responses given to the questions asked the panel.

At the conclusion of the day each group polled itself and forwarded to the Quincy Education Association its reaction to the ES'70 proposal. Over 90% of the 400 teachers participating recommended that the Quincy Public Schools accept the invitation of the U. S. Office of Education to affiliate with ES'70.

Q-PED - COPED (Quincy Project in Educational Development - Cooperative Project in Educational Development -- In all probability such in-depth involvement in this important decision would neither have been considered nor risked if it had not been preceded by nearly two years of Q-PED - COPED activity in Quincy. In the fall of 1965 the Quincy Education Association, with the encouragement of the administration, developed a position paper centered on the theme of establishing a climate for change in the school system through human relations training. The paper was presented to behavioral scientists at the Human Relations Center of Boston University. This group immediately recognized that the QEA values and goals were very compatible with change strategies being suggested by Project COPED. Quincy became the focal point of the Boston University and Lesley College COPED activity. The Quincy effort came to be identified as Q-PED. /1/

For the next three years Quincy educators engaged in extensive human relations training through Q-PED - COPED. The thrust of the effort was to establish a climate for change by building trust, opening up channels of communication, and involving teachers at all levels and, in some areas, students in the decision making process.

To date over 70% of the Quincy schools' 850 professional staff members have taken part in Q-PED activities ranging from one day in-service, released-time workshops to a five week summer dialogue for teachers and students in one junior high school.

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1 COPED linked behavioral science teams at eight universities and cooperating school systems for the exploratory development of models of planned change. NTL Institute coordinated the project. The Bureau of Research, USOE, provided support.

Among the most successful of these activities were several day long released-time institutes for groups of 50 teachers drawn from all grade levels as well as subject areas. Each day-long session was followed by a two day overnight educational retreat at which teachers and administrators faced their perceptions of each other and discussed common concerns, anxieties and aspirations.

All sessions were planned by a steering committee of teachers and administrators as well as human relations consultants from the Human Relations Center of Boston University and from Lesley College. Classroom teachers who participated in the sessions were invited by the Quincy Education Association and substitute teachers were hired by the school department.

Funding for Q-PED has come from a variety of sources including the Quincy School Committee, the teachers association, the federal government, the Simons-Gutman Foundation of Temple Israel in Boston and the participants themselves.

After two years of Q-PED activity aimed at establishing a climate for change and several modest involvements in group and building level undertakings the process was tried out for the first time on a large scale when all the secondary school teachers came together to consider and accept the ES'70 invitation.

Q-SCAP (Quincy School Community Action Program) -- In addition to being the vehicle for reaching the ES'70 decision, Q-PED's most ambitious undertaking to date has been a 14 month (including two summers) effort to establish a climate for change in one junior high school. Until two years ago, decision making in the school was centralized (as is the case in most schools) in the administration. Now, there is a great deal of teacher, student and, most recently, community participation in decision making.

Encouraged by the principal of nearly 20 years experience, and supported by federal funds, 20 teachers and 45 students worked together under their own leadership for five weeks during the summer of 1968 in an effort to establish a climate for change that would allow the consideration of a more relevant curriculum for the entire student body as well as a broader base for decision making. The project caught the enthusiasm of teachers and students and during the 1968-1969 school year both groups worked at opening up lines of communication between the faculty of 50 teachers and student body of 800. The past year has seen a great deal of faculty and student participation in decision making. Enthusiasm and involvement has run so high that teachers, independent of the administration, prepared a proposal for federal assistance in order to keep the effort alive. As a result a second summer session was funded for 1969.

DEEP (Developing Economic Education Principles) /1/ -- Prior to Q-PED, decision making in Quincy followed more traditional lines. The decision to accept the 1965 invitation of the Joint Council on Economic Affairs to affiliate with Project DEEP is in sharp contrast to the ES'70 procedure and other post Q-PED decisions.

As with ES'70 the invitation to affiliate with DEEP was made to the Superintendent, the same Superintendent. Unlike the procedure followed three years later in ES'70, only a handful of senior advisors were involved in deciding that the system would become involved in DEEP. However, since the first and critical decision was made by a limited few, the process of making decisions concerning DEEP has broadened to include all the teachers in the four elementary schools where DEEP materials are being introduced. Two afternoon released time workshops each month are attended by all teachers participating in DEEP and it is here that decisions about DEEP are made. While few of those affected by DEEP were involved in the original decision to go ahead with the project, that has been corrected to the point where the decisions for the implementation of the effort and for future expansion rests with those who are to be affected.

ABLE -- Project ABLE is another example of a project closely identified with ES'70. It began prior to Q-PED but is still in the developmental stage. In 1964 a small committee of senior administrators served as advisors to the Superintendent and shared in the development of ABLE. Today the same Superintendent would not follow that procedure. Critical decisions in ABLE are now made with the involvement of all teachers who are responsible for implementation. For example, in the summer of 1967 a two week workshop was planned for all teachers who were to teach in Project ABLE during the 1967-1968 school year. Two months before the two week workshop was held, the 30 teachers who were scheduled to participate in the workshop spent a two-day overnight Q-PED session developing the syllabus for the two week summer institute.

Since 1965 Quincy educators have been experimenting with decentralizing the decision making process. As stated earlier this new participative involvement is still in the embryonic stage. Since the spring of 1968, the emphasis has been on a more structured systems approach to decision making that is consistent with and can reinforce the basic assumption that all those who are affected by a decision should share in making the decision.

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1 Project DEEP is a joint effort of the Quincy Public Schools and the Joint Council on Economic Education and forty other school systems aimed at integrating economic education at all grade levels.

Team Structure -- In continuing the process of molding a creative organizational character there is a new kind of resource mobilization for the attainment of goals. A four dimensional team structure has been developed that in design involves all members of the professional staff in decision making. The teams are (1) Superintendency, (2) Learning Management, (3) Curriculum and (4) Expanded Curriculum. The Superintendency Team includes the Superintendent, the Assistant Superintendents for Instruction, Vocational-Technical, Personnel, and Plant, the President of Quincy Junior College and the Administrative Assistant for Business Affairs.

The Learning Management Team (LMT) consists of the Superintendent, the Assistant Superintendents for Instruction, and Vocational-Technical, the Elementary and Secondary School Coordinators, and the Director of Pupil Personnel Services.

The Curriculum Team (CT) includes the Assistant Superintendents for Instruction, and Vocational-Technical Education plus all the system-wide directors and coordinators in math, science, language-arts, social studies, music, art-humanities, physical education, pupil personnel, and research.

The Expanded Curriculum Team (ECT) has no permanent structure and no permanent members. Several Expanded Curriculum Teams can and do exist at any given time. An ECT is a task force brought into being to consider a problem or a proposal that has arisen. It includes representatives from all those who are to be affected by the decision including students, custodians, teachers and administrators. An ECT can be organized around a concern that is limited to grade level, department, or subject area; or it can focus on a topic that is of concern to a building faculty or the entire system. There is no issue, or topic that is excluded as not being pertinent or within the province of an ECT to consider. Any member of the educational community can suggest an issue or a concern that might call for the organization of an ECT. However, in itself an ECT is not a decision making body, but rather makes recommendations to the Curriculum Team. Its existence is a kind of barometer about issues and serves to make the system responsive to needs.

The Curriculum Team has as a primary task the responsibility of receiving from any source all proposals or recommendations that could have a system-wide influence. In addition, the Curriculum Team is responsible for developing the educational budget, and for reviewing all requests for alterations or renovations to learning spaces. The Curriculum Team is charged with the responsibility of integrating learning experiences across discipline lines and of providing the thrust for on-going efforts to more adequately individualize the teaching-learning process. Individual members of the CT are responsible for assuring relevancy within the instructional program of their discipline.

The Learning Management Team serves as the systems analysis component of the school department. It is responsible for identifying the many segments of the system and for maintaining a systems approach to organization, research and development, and implementation of the instructional program. The LMT is responsible for seeing that instructional practices and the teaching-learning process at all levels is consistent with contemporary learning theory. In addition, the LMT contributes to the development of the budget and serves as a weekly briefing group to the Superintendent.

For the most part critical decisions affecting the educational program of the system are made at the LMT level on recommendations forwarded through an ECT or the CT.

The Superintendency Team has few responsibilities assigned to it as a group. Individual members of the ST function as appropriate and according to task, at anyone of the other three levels. In a recent six month period the ST met only once as a unit on a task and that was to screen candidates and make a recommendation on a new Assistant Superintendent for Instruction.

The fact that the ST does not meet regularly and is not the focal point of decision making does not reflect abdication of responsibility. Rather, it is indicative of an effort to decentralize decision making consistent with good systems practice. Members of the Superintendency Team still carry the responsibility for decisions made or not made within their area of competence; however, the structural changes in the process permit participative decision making at other levels.

This Quincy case study describes an evolving organizational development program in a human system which has been moving from a centralized, traditional hiararchy to a more dynamic, self-renewing, decentralized structure in six years. The change process has been traced by looking at major program events in terms of how decisions were made. Past administrative practices and leadership style shifted to collaborative transactions including all levels. Major emphasis was on building a new collaborative organizational climate. These newly emergent values necessarily cut across organizational structure, policies, work methods. The objective is to develop trust, openess and joint decision making.

The major input for these new practices, norms, attitudes and values came from the training and consultation programs with the COPED applied behavioral scientists.

At this time, there is no conclusive pre and post evaluative resources available to report. However, developmental research is continuing to trace the spread of the effects of increased participation in decision making. Although the Quincy data are yet to be analyzed, a similar effort is reported by Schmuck /1/ in which organizational training (which had teachers, principal, secretary, head cook, and custodian working together to identify building problems and decide on solutions to them) appeared to increase classroom innovation rates. Increased trust, communication, and active problem-solving among the adults appeared to have released a good deal of innovative energy, though no one had explicitly helped the teachers, or even urged them, to teach in different ways. Many of the teaching innovations noted were adaptations of the organizational training exercises the teachers had themselves experienced, so that in some respects, the "medium was the message."

There is also considerable informal, empirical evidence about the positive behavioral effect in the Quincy system. One sees new rapproachment between and across levels. In some instances, a new team spirit has replaced internal conflict and dissatisfaction. Many teachers have stated that now their personal goals matter in a way that they can reconsile, not subordinate them with the system's needs.

We recognize that there is pain and tension which results from "disconnection" with traditional patterns and that it takes a long time for changes to filter throughout a system. Quincy is learning how to plan for and manage the change process, both the technological and the human. A change process cannot be conceived as having a specific beginning and end. The aim in Quincy is to integrate new values and new processes of work relationships into the system while preserving the more functional of the traditional values and structures.

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1 Schmuck, R.A., Helping teachers improve classroom group processes. J. of Appld Behavioral Scientists, 1968, 4, (4), 401-435.

CONCLUSION

In the "Implications" which follow, Lucille Schaible derives recommendations for possible action coming out of the New Orleans Conference. These touch on the need to involve students, to establish collaboration between teachers and curriculum experts, to link school and community, to improve teacher training, to "learn more about how to operationalize cognitive learning" and to bridge the gap between "book learning" and "reality," to view learning as a complex of processes involving feeling, knowing, valuing, and acting. The implications suggest possible guidelines for continuing work to improve curricula.

One recurring theme concerns the need to involve those who must implement change and "consume" change as well as those who must help deign it as experts. This seems to call for linking up the teacher, the student, the curriculum specialist, the behavioral scientist, the administrator, and the association leader.

A recommendation of another order coming out of New Orleans is that the kind of dialogue or conversation initiated during the Conference should be continued as a means of establishing linkages and resource utilization called for in the various suggestions. It should be noted that while the start of the Conference was somewhat turbulent as anxieties, fears, conflicting viewpoints were aired, the basic Conference design making this turbulence possible and even encouraging it seemed to be productive. The participants did move on to good work in an atmosphere where differences could be openly expressed.

This report as a whole yields additional implicit recommendations. The Guidelines and Pitfalls confronting the change agent as Lippitt describes them suggest the need for deliberateness and for awareness of process skills as a necessary element in planned change. Lippitt's recommendations concerning a national team and the articulation of a vertical and horizontal organizational approach should also be noted.

Rhodes' definition of systems analysis and design seems especially relevant to ES '70 objectives. Continuing study and effort to apply systems approaches seem promising. Rhodes too warns against pitfalls. Technology can be used to make mechanistic depersonalized programs more efficient. But it can also be used to build more humane organizations.

Finally, a number of conclusions and recommendations can be derived from the Quincy case. This story can be read as an effort to meld systems approach (with a de-emphasis upon the more mechanistic elements) with a human relations training approach for achieving interpersonal competence and organizational health. Creedon and Ritvo tell the Quincy story in terms of evolving processes by which decisions are made and the circle of those with influence is widened.

IMPLICATIONS FOR THE FUTURE [1]

Behavioral Objectives

1. Many of the experts agree that going to the experts in subject matter areas for behavioral objectives limits creativity and is not productive. We also know that decisions that are imposed from the outside are often rejected by the "insider". There is a need for involvement by the user or learner in setting his own objectives.

This implies a need to go to the practitioners and students for behavioral objectives that are relevant to them. Certainly these persons are in strategic positions to help formulate value judgements about behavioral objectives. Mechanisms and procedures are needed for stimulating and retrieving these.

2. Another implication to come out of discussions in this area would be for curriculum developers to take an experimental attitude toward the development of curricula with and without behavioral objectives. The delegates to the conference were not in agreement as to the best way to proceed. Some of the experts might develop and test curricula prior to the formulation of behavioral objectives. Others could proceed by formulating objectives first, getting a wide variety of inputs into those formulations. Comparative evaluation of the two methods might give us a better understanding of the most productive ways of working in the future.

3. The concern expressed by many delegates was that behavioral objectives tend to create rigidity in teaching methodology, course content, and programs. Perhaps there is a two-fold implication here around flexibility of objectives,

a- a need to move away from academic objectives only, to some additional criteria for the formulation of objectives that are more relevant to the students' interests. Such intervening variables in the learning process as satisfaction with school, motivation to learn, interaction influence in decision-making, etc. might help us derive such "more relevant objectives".

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[1] Derived by Lucille Schaible as New Orleans Conference Report editor from the Report.

b- Formulating behavioral objectives that are not limited in measurement to academic goals but can be measured in a variety of ways to allow for individualization of instruction. For instance, acquiring and holding an outside job that requires utilization of knowledge gained in a subject area in the classroom might be a better way of evaluating the learning of a student than grading the student on a final exam or a term paper he has written. Such an objective might also serve to motivate the student to learn those concepts and skills he will need in order to experience success on the immediate future job.

Relevance

1. The major implication here is that curriculum developers need to be in contact and communication with student needs. Mechanisms and procedures should be found for involving students in curriculum planning and development.

2. Care must be taken to develop ways of differentiating between different needs of different groups of students in order to make instruction socially and personally relevant to all students.

3. Another implication to come out of this statement of a need for relevance is the need to develop guidelines for including learning experiences and materials that are not immediately relevant. Such guidelines might be derived from knowledge about maturation and readiness versus preparation and overview as a reason for building basic skills.

4. We need to learn more about how to operationalize cognitive learning. The gap between "book learning" and "reality" when you're on the firing line, is well known by first year professionals in almost any field. Experiential learning activities and projects should be designed, developed, and tested in order to build the likage for the student between cognitive, emotional, and behavioral learnings. This might do more to help find and build that "relevance" into the educational program than many other approaches that could be taken. Perhaps the "experts" need to think through and test the behavioral relevance of subject matter knowledge to some of todays' social problems, and the environmental concerns with which students have to daily cope.

Individualization of Instruction

1. There was wide agreement among conference delegates that instruction should be individualized to develop the "unique potentialities" of the individual. One major implication here is the need to develop better diagnostic methods and skills for determining:

a- individual aptitudes and "unique potentialities" as well as
b- individual ways of responding to a variety of learning situations (i.e., what is the best teaching methodology for this student? Will he learn better in a classroom situation, or in a tutorial one? Is he more responsive to machines than to teachers? Does he learn better if he has been involved and influential in the decisions made about the selection of courses he is taking?).

2. Another implication is that once the diagnosis has been made there should be a commitment to the development of individual potentialities, Perhaps the student who is musically talented and creative should receive more educational

focus in this area than is presently possible under todays' system. This implies a rethinking and clarification of educational values. Our present system places high value on academic achievement and in elementary and secondary schools very little value as far as educational focus is concerned on artistic achievement. This results in a frustrating and disappointing failure experience for many students.

3. Another implication has to do with a clarification and reformation of educational values to include the cultural values of the different ethnic and socio-economic groups that make up our American Society. Our educational system acknowledges and promulgates middle-class values with little regard for the rich variety of value postures of its students.

4. Individualization of instruction implies increasing the range of supports and increasing the initiative of students to be more selective. Resources need to be organized in a way in which students can both select and utilize them according to their learning needs.

5. An issue comes up here as to whether students should be geared to machines or related to more sensitive teachers. It could be that some combination of both machine and sensitive teachers is needed. Certainly the implication is for more experimental efforts to be made along these lines.

Integrated Programs

1. There was disagreement among delegates about the value of integrating disciplines and a great deal of concern expressed about the possibility of losing some of the basic skills of a discipline if this approach were taken. Even so, there seemed to be a common agreement that some integration is needed. A number of suggestions were made about the integrating principle to be used, such as life roles of students, modern language, social problems, etc. One major implication to come

out of all this is that there is still a lot of work to be done before solutions that are satisfactory can be found. There is need for more creative brainstorming by the experts, a wider variety of inputs from the human resources that are available and relevant such as students, teachers, parents, employers of students, college students, high school dropouts, etc. We need to look at a wide range of alternatives and to try out different ones before we settle for any one direction. Many curriculum development projects are called for that deal specifically with this problem. Teacher training is also needed to help teachers become catalysts in the learning process.

2. Students themselves could do integrative work if they are helped to do so via special projects and activities that cut across the disciplines in a problem-solving approach to learning.

3. Teachers from different subject matter areas could be integrated into teams that also utilize the problem-solving process, each making inputs into the solution of a problem.

Redefining What It Means To Be Educated

1. The rate of change of occupational roles requires continuing education as a meaning of what it means to be educated. There is a major issue here and an implication that educators need to deal with the question of what to do with boys and girls after they leave high school.

2. Flexibility must be built into the educational system for students to shift from programs to jobs and back to programs again. There is need for a system that allows for a shifting of learning emphasis for the individual student according to his needs at any given time as, well as transitional linkages to allow for conceptual integration and continuity of learnings according to long-range goals.

3. One group said, "education should help the student learn how to become involved in the affairs of the community, nation, and society." The implication here is that educators, educational systems and institutions need to find ways to accept and make use of student unrest, criticism and protest. Students should be seen as resources, both actual and potential. Programs and projects which invite and train students in becoming involved in the decisions that directly affect them, that train and help students problem-solve their own learning problems; that help them understand and utilize the political human organization of which they are a part; are some of the implications to come out of this conference and the mood and events of our time.

In-Service Teacher Education

1. It was generally agreed that there was a great need for continuing professional development to help teachers keep up with new knowledge, and to educate them in new teaching methodologies that are specifically related to new curricula. One of the implications is that manpower for conducting in-service education programs will have to be identified, recruited, and in many cases trained.

2. In-service teacher education programs and projects need to be developed and field tested for dissemination. Some of those who are developing new curricula for students may need to commit their time and energy to the development of new curricula for teachers as well. On the other hand in certain areas of knowledge there may be those human resources who can develop in-service teacher education programs that cut across and are relevant to the teaching of a wide variety of subject areas. An example of this would be the "Inquiry Teaching Methodology" developed by Lippitt, Fox, and Schaible as teacher training resources to be used

in conjunction with their new Elementary Social Science Education. With additional developmental effort these resources could be made relevant to teachers in a number of subject areas at both or either the elementary and secondary level. A search for such developers and materials might be made/

3. Mechanisms and procedures should be found for resolving the dilemma between teachers and curriculum experts. The experts need to be in contact and communication with teachers and their needs just as they do with student needs. Teachers also provide a vast unused pool of resources that should be tapped by the experts. Many of them could be used as creative collaborators in the development of student curricula, teacher training programs, evaluation designs, dissemination designs, adult education programs aimed at parents of students, etc. This would also provide a reservoir of support for educational change.

4. Obviously great amounts of funds will have to be poured into such an effort in order to develop, test, establish, and maintain continuing professional development for teachers.

Structural Change in Programs, Scheduling, and Course Requirements

1. Studies will have to be made to determine what kinds of scheduling best meets individual needs. We need to get a modular sense of scheduling which may mean extending the school year to 12 months, and the school experience from K through 13.

2. Again there is a need to rethink, clarify, and in some cases modify educational values. Are all course requirements actually requisite to all students learning capacities and abilities? Is the order of learning in specific subject areas truly as rigid as it appears to be? What rules, regulations, and orders do we dare to relax in order to try out some new creative experiements?

3. There needs to be a reorganization of resources both in schools and in the community. Examples of this would be establishing learning resource centers in schools (i.e., school library having a greater variety of resources, being more readily available at all times of the day and night to students, and manned with creative consultants who can be helpful to students, a student lounge or activities room conducive to peer group bull sessions, individual, pairs, and small group study sessions, conflict management dialogue and activity between individuals, small groups, teacher and student, etc; learning resource centers maintained in various parts of the community and available to students both day and night; utilization of community people as adjunct both inside and outside of school.

4. Development and field testing of a non-graded school structure where students in collaboration with teachers and counselors determine their own learning goals, set their own learning pace, problem-solve their own learning problems, and graduate in their own time. Self-diagnostic skills and methods for collecting continuous evaluation feedback could be offered to students in such an educational setting.

Other Implications

1. An implication coming out of the total conference is the need for a continuing dialogue between the experts. Communication linkages should be established and kept open between curriculum developers, discipline experts, etc. This would lead to greater creative collaboration, elimination of unnecessary overlap and therefore savings in energy, money, and time and more cross fertilization of ideas and the stimulus for new ones.

2. We need to educate and involve the community in the education and socialization of the young. The vast disonant sounds of a variety of inputs to our young need to be listened to by those who are making them..This would help us discover ways of coping with the rich multiplicity and plurality of educational and socialization inputs that are constantly impacting the young learner. It would also put

the educational and socialization agent in a better position to understand the dilemma of the student.

APPENDIX

A - Participant Roster, ES '70 New Orleans Conference

B - One Perspective of the ES '70 Conference in New Orleans by Robert Geller

CONFERENCE ON AN EDUCATIONAL SYSTEM FOR THE SEVENTIES

March 6-8, 1968 New Orleans, Louisiana

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UNITED STATES GOVERNMENT

Memorandum

TO :	New Orleans Conferees and ES '70 Interested Parties	DATE: March 22, 1968
FROM :	David S. Bushnell, Director Division of Comprehensive and Vocational Education Research	
SUBJECT:	One Perspective of the ES '70 Conference in New Orleans	

The following memorandum from Mr. Robert Geller, Chairman, English Department, Mamaroneck School District, New York, expresses at least one viewpoint of the New Orleans conference. The memorandum was originally written for Dr. Haake, Superintendent, Mamaroneck. I wanted to share this with you and extend our appreciation for all those who participated and made the conference the success it was. Let me also observe that we are planning to continue communications with you and hopefully to follow up with individuals who want to participate in the development of this major curriculum change effort. There have been a number of letters detailing recommendations and comments. We will respond to these as the opportunity presents itself. Again, thank you for joining with us in this enterprise.

APPENDIX B

5010-108

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

March 11, 1968

TO: Dr. Bernard Haake, Superintendent
Mamaroneck School District
Mamaroneck, New York

FROM: Bob Geller, Chairman
MHS English Department

An august body of curriculum planners, professorial talents, industrial executives, articulate student representatives and secondary school educators were summoned to this conference to share their collective skills and aspirations.

E.S.'70, energetic plan to integrate curriculum ideas from 17 schools throughout the country, had carefully and methodically involved secondary school educators in earlier plans to make immediate and relevant the learnings of students in a technological age. The attempt in New Orleans was to involve educators and behaviorists in three days of evaluating ongoing efforts and in three days of careful defining of behavioral goals.

An explosion occurred during day number one. E.S.'70 had loaded its dice and naively assumed that careful measurement of spelled-out goals in behavioral terms was needed. The educational establishment came with no such unanimous endoresments, with no real knowledge of the real purposes of a 17-school network. Day #1 was marked by distrust, by a demand for terms other than behavioral jargon and computer slang. Clearly, humanists split from the behaviorists; vested interests were apparent and the fear that government funds would be diverted from already operating projects was quite obvious.

The New Orleans climate and night life were instrumental in keeping the entire body from bolting. Equally important as palliating agents were the student representatives and the high school teachers who came with no real fear of loss of status or of their vitiating their own sacred disciplines.

Day # 2 was marked by overt distrust, by a need for clear-cut communication as to what E.S.'70 was all about, and by a plea for interaction. For over eight hours groups met in small and informal patterns to dig it all out, to establish the real primacy for a curriculum badly in need of overhauling. By late post-dinner hour these things were apparent:

...E.S.'70 is primarily concerned with a curriculum which deals with the student bound for either junior college study or for technical careers.

...neither behaviorists nor humanists have laid claim to successfully educating the disenfranchised in America. So their selfish claim to primacy is to be denied. A give and take of successful techniques and educational styles will be essential if E.S.'70 is to succeed.

Day #3 was roseate. The 76-degree temperature helped. Gimmicks and hidden agendas were gone. The student representatives made lucid and passionate pleas for a curriculum that had relevance, that was geared to life experiences, that could command the total energies of a community and its entire resources.

Participants broke into special discipline groups (math, humanities, English) to discuss ways that a curriculum for the work bound (and life bound) could be designed without abdicating the clinical and antiseptic behavioral goals. Strong cautions against superficial integrating and meshings were expressed. A final minority plea for assessments of all experiments was met now with far less reluctance by the empirical and the pragmatic. With $35 million invested in curriculum development some support of intuitions was deemed essential and strategic.

E.S.'70 teachers and administrators also met on Day #3 to discuss ongoing innovations "back home," to underline the need for immediate interaction so that the word network was more than an euphemistic term; to ask for definitions and assurances as to who assesses, who writes curriculum and who evaluates ongoing experiments.

Conferees adjourned on March 8 still quite scarred, still somewhat querulous but above all having developed a mutual respect for each other and a strong regard for what E.S.'70 can be.

In brief: Educators perish unless they can give and take, unless they can surrender some vested interests, unless they can distinguish between humanistic intent and native institutions. What was resolved is that the 17 experimental schools must operate with freedom and with relative autonomy in order to develop integrated and relevant studies not only for the work bound, but for the overwhelming number of students who find their schooling lacking vigor and relevance.

That there was lots to be done, that an educational crisis was imminent, that cities may burn soon while humanists and behaviorists debate in good cheer and good fellowship struck this observer like the last knife thrust of the scorching Louisiana sun on the silver whisperjet.

Respectfully submitted,

Bob Geller